meridium

Release Notes

V3.6.0.0.0

Meridium APM Release Notes
V3.6.0.0.0

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V3.6.0.0.0

Hardware and Software Requirements Changes

The following changes have been made to the hardware and software requirements in V3.6.0.0.0:

Meridium APM Application Server

- Meridium APM now requires the following components:

  - Oracle Data Provider for .NET (ODP.NET) *12.1.0.1* (both 32-bit *and* 64-bit)

  - Oracle Services for Microsoft Transaction Server *12.1.0.1* (64-bit)

  (TS ID: 60378)

- Windows Server 2012 *R2* is now supported. (TS ID: 60053)

- Internet Explorer *11.0* is now supported. (TS ID: 59386)

- To support the mobileAPM application, Microsoft.net *4.5* is now required on all Meridium APM Application Server instances. If this is not found, the installer will install it automatically. Microsoft.net 3.5 SP1 and 4.0 are also still required. (TS ID: 60892)

Meridium APM Framework Machines

Windows *8.1* is now supported. (TS ID: 59386)

Meridium APM Web Framework

You can now use Internet Explorer *11.0* to access the Meridium APM Web Framework. (TS ID: 59386)

Database Server

- *Oracle 10* is no longer supported. (TS ID: 42859)

- *Oracle 12.1* is now supported (TS ID: 53071)

- For Oracle 11.2, the Meridium, Inc. testing environment now includes *11.2.0.4* in addition to 11.2.0.1. (TS ID: 59639)

Process Data Integration (PDI)

PDI now supports the following process historians:

- OSIsoft® PI Server version 3.4.390.16.

- IP21 (Aspen ONE V8.0) Version 12.0.0.20, which provides DA access only.

- IP21 (Aspen ONE V8.0) Version 12.0.0.20 with MatrikonOPC IP21 Server Version 2.2.1.3763, which provides DA and HDA access.

(TS IDs: 55819, 43705)

SQL Server Report Server

The 32-bit Meridium APM Server and Add-ons installer is no longer available. As a result, the 32-bit Meridium APM Adapter for SSRS is no longer available. If you are upgrading from a previous version in which you were using the 32-bit Adapter for SSRS, you will need to uninstall the older 32-bit version and install the new 64-bit version on a 64-bit SQL Server Report Server. (TS ID: 62595)

Enhancements

Installation, Upgrade, and System Administration

Database Comparison Tool

You can now use the Database Comparison Tool to compare your database to the baseline Meridium APM database for hot fix and maintenance release versions.

Note: Hot fix-specific zip files do not exist for pre-V3.5.1 hot fix versions. When you compare your database to pre-V3.5.1 hot fix versions, the Database Comparison Tool uses the zip file for the *main* version to generate the comparison.

Applications

Meridium APM Framework

Spell Check Feature

The *custom.dic* file supports the Spell Check feature by storing the words that you add to the dictionary. Previously, the *custom.dic* file was stored in the folder **<root>\Program Files\Meridium**, where **<root>** is the root drive and location in which the Meridium APM Framework application is installed. If you did not have full permissions to the root folder, however, and you used a feature that accessed the file *custom.dic*, an error message may have appeared, indicating that you did not have access to the file. To prevent this issue, the custom.dic file is now stored in the folder

C:\ProgramData\Meridium. No additional permissions are required to access this file from this location. (TS ID: 59334)

APM Foundation

Security and Accessibility

To provide additional security, Meridium APM now tracks security events for each user in your system. To support this enhancement, the query *Security Event Log* has been created and is stored in the Catalog folder \\Public\Meridium\Modules\Core\Queries. This query returns the following security events for each Security User in a given Meridium APM database:

- Successful login

- Failed login

- Password changed

- User activated

- User inactivated

- User modified

- User created

(TS ID: 40373)

SAP Interfaces

The following enhancements have been made to the SAP Interfaces in V3.6.0.0.0:

- You can now log changes made to certain tables. For the following tables, you can track who made a change, what they changed, and when the change was made:

- /MIAPM/MAPPING

- /MIAPM/TASK_CNF

- /MIAMP/PARAMS

- /MIAMP/PI_PARAMS

To enable table change logging, in SAP, you must activate the system profile parameter *Rec/Client.* (TS ID: 55014)

- To support the new Asset Criticality Analysis (ACA) feature that provides integration with SAP, the following changes have been made:

  - The following function modules have been created:

    o /MIAPM/GET_INDICATORS: Used by the Criticality Mapping family to return ABC Indicator values from the target SAP system.

    o /MIAPM/UPDATE_TECHNICAL_OBJECT: Used to send ABC Indicator values from Meridium APM to the target SAP system.

  - The following queries have been added to the Catalog folder \\Baseline\Meridium\Modules\SAP Integration Interfaces\Queries:

    o Get ABC Indicator for Functional Location

    o Get ABC Indicator for Equipment

This feature is enabled by the license *SAP Interfaces - Criticality Assessment.* (TS ID: 54090)

Asset Criticality Analysis (ACA)

You can now use ACA to update the criticality indicator values in SAP to reflect the criticality that you determine in your ACA Analysis. To facilitate this enhancement, the following changes have been made:

- The license *SAP Interfaces - Criticality Assessment* is now available for activation. To use the functionality enabled by this license, the *SAP Interfaces – Foundation* license must also be active.

- The following families have been added to the Meridium APM baseline database:

  - Criticality Mapping: Stores records that identify the criticality indicator values that exist in your SAP system.

  - Has Criticality Mapping: Links Criticality Mapping records to corresponding Risk Threshold records in Meridium APM.

- The following queries have been added to the Catalog folder \\Baseline\Meridium\Modules\SAP Integration Interfaces\Queries:

  - Get ABC Indicator for Functional Location

  - Get ABC Indicator for Equipment

- A new field, *System Log*, has been added to the Asset Criticality Analysis System family. This field contains information about any errors that occur when you send criticality indicator values from Meridium APM to SAP.

(TS ID: 54090)

Process Data Integration (PDI)

The following enhancements have been made to Process Data Integration in V3.6.0.0.0:

- The Update Rate field in the Xi System and Xi Tag families has been renamed to *Requested Update Rate*. This change was made to clarify that the update rate is not guaranteed, but rather is determined by the OPC server. The *actual* update rate is the rate that is closest to the Requested Update Rate and that the OPC server can support. (TS ID: 58772)

- PDI now supports the following process historians:

  - OSIsoft® PI Server version 3.4.390.16.

  - IP21 (Aspen ONE V8.0) Version 12.0.0.20, which provides DA access only.

  - IP21 (Aspen ONE V8.0) Version 12.0.0.20 with MatrikonOPC IP21 Server Version 2.2.1.3763, which provides DA and HDA access.

  (TS IDs: 55819, 43705)

- Previously, the record ID for Xi Reading records included the timestamp of the reading, which sometimes caused confusion due to time zone discrepancies. To prevent this confusion, the record ID for Xi Reading records now includes the reading value and not the timestamp. (TS ID: 51127)

- The following queries are no longer used and have been removed from the Catalog folders \\Public\Meridium\Modules\Process Data Integration\Queries and \\Baseline\Meridium\Modules\Process Data Integration\Queries.

  - Active Xi Tags for Snapshot

  - Active Xi Tags to Graph

  (TS IDs: 44966, 59377)

Operator Rounds

The following enhancements have been made to Operator Rounds in V3.6.0.0.0:

- The **Recommendation History** screen on a handheld device has been enhanced. To facilitate this enhancement, the Operator Rounds Recommendation records that appear on the **Recommendation History** screen are now retrieved based on the Asset Key, rather than the Asset ID, of the related Measurement Location record. (TS ID: 52830)

- Previously, the Operator Rounds module used the Stored Reference Document family to associate reference documents with Measurement Location records. The use of this family was not consistent with other modules. Therefore, in order to increase consistency across all modules, Operator Rounds now uses the Reference Document family for this purpose.

  When you upgrade your database to V3.6.0.0.0, the database upgrade process will:

  1. Replace any Stored Reference Document records in your database with Reference Document records. This means that any reference documents that were previously associated with a Stored Reference Document record will be associated with a new Reference Document record. The new Reference Document record will be linked automatically to the corresponding Measurement Location record.

  2. Delete the Stored Reference Document family from your database. As a result, the **Refresh Ref. Doc.** Associated Page will no longer be available. This means that if you modify the original copy of a reference document that is stored in the Meridium APM database and you want a device user to be able to view those changes, you will no longer be able to use the Associated Page link to update the reference document. Instead, you will need to manually update the corresponding Reference Document record. (TS IDs: 56510, 59503)

- You can now create a single schedule that applies to all checkpoints within a Route. To facilitate this enhancement, the following changes have been made:

- The following fields have been added to the Route family: *Schedule*, *Next Date*, and *Last Date*. You can use these fields to create and manage schedules for Routes.

- In scenarios where a Route *and* a checkpoint within the Route have a schedule, when you download Routes to a handheld device, the corresponding checkpoint will be downloaded to the device only if *both* schedules indicate that it is due.

- When you upload data from a handheld device to Meridium APM, only the Routes for which all readings have been completed will be uploaded, by default. To enable the upload of partially completed Routes, a new screen, **<Route ID>**, has been added to the Operator Rounds mobile application. You can use this screen to change the status of a partially completed Route to *Finished*. Doing so allows the Route to be uploaded from the device to Meridium APM.

- A new family, *Route History*, has been added. When you upload a Route to Meridium APM, a Route History record will be created and linked to the Route record through the *Has History* relationship family. Route History records include the following new fields, which are populated automatically with the data that is uploaded from the handheld device:

  o Close Date

  o Status

  o Comments

  o Readings Taken

  o Readings Expected

  If you are using Operator Rounds for the first time, the date in the Close Date field will be stored in UTC time by default. However, if you are upgrading from a previous version, the date in the Close Date field will be stored in the same format as the date in the Reading Taken Date field in the Reading family. Specifically, if the date in the Reading Taken Date field is:

- o Stored in local time (i.e., the **UTC?** property for the field is set to *False*), the date in the Close Date field will also be stored in local time.

  If the date in the Reading Taken Date field is stored in local time but you want to start storing it in UTC time, prior to upgrading to V3.6.0.0.0, you should contact Meridium, Inc. for help in assessing the impact of modifying the **UTC?** field property and performing any additional steps that are needed as a result.

- o Stored in UTC time (i.e., the **UTC?** property for the field is set to *True*), the date in the Close Date field will also be stored in UTC time.

(TS IDs: 35528, 42959, 60617)

Lubrication Management

Previously, the Lubrication Management module used the Stored Reference Document family to associate reference documents with Lubrication Requirement records. The use of this family was not consistent with other modules. Therefore, in order to increase consistency across all modules, Lubrication Management now uses the Reference Document family for this purpose.

When you upgrade your database to V3.6.0.0.0, the database upgrade process will:

1. Replace any Stored Reference Document records in your database with Reference Document records. This means that any reference documents that were previously associated with a Stored Reference Document record will be associated with a new Reference Document record. The new Reference Document record will be linked automatically to the corresponding Lubrication Requirement record.

2. Delete the Stored Reference Document family from your database. As a result, the **Refresh Ref. Doc.** Associated Page will no longer be available. This means that if you modify the original copy of a reference document that is stored in the Meridium APM database, you will no longer be able to use the Associated Page link to update the reference document. Instead, you will need to manually update the corresponding Reference Document record. (TS IDs: 56510, 59503)

Asset Health Manager (AHM)

The following enhancements have been made to Asset Health Manager in V3.6.0.0.0:

- For Health Indicators whose primary source records are Xi Tag records, on the **Asset Health Manager** page, on the **Trend** tab, the default values for the Data Range lists have been changed from a time span of ten years to a time span of two days. This change was made to limit occurrences in which the requested time span exceeds the amount of data that is available from the OPC Server. (TS ID: 60315)

- The AHM service, which was introduced in V3.5.0, is used to update Heath Indicator statuses automatically. The Health Indicator Updater scheduled item, which was previously used to update Health Indicator statuses, is now obsolete. When you upgrade your database to V3.6.0., the Health Indicator Updater scheduled item will be removed automatically from your database. (TS IDs: 59472, 53844)

Failure Elimination

Production Loss Accounting (PLA)

In previous releases, you could create a production profile by defining the amount of product that you could produce during a given day. Then, you were able to define production plans against that production profile and its corresponding production unit. Within the production plan, you could specify whether you planned to product the same amount of produce on each day or different amounts of product on different days.

Beginning in V3.6.0.0.0, the process for defining production plans has been enhanced. Now, for each production profile, you can define how much product you can produce in one batch and how often you can generate that batch. For example, if you are producing gasoline, you can now specify that you produce gasoline on an hourly basis, your standard batch size is 1,000 barrels, and you can produce one batch (1,000 barrels) every six hours. More flexibility is also now available when creating production plans. For example, you can specify:

- Which products you plan to produce during the planning period (you can now produce more than one product per plan).

- Whether you want to define the start and end date manually or define the start date and planned production quantity, letting the system determine the end date automatically.

- If producing more than one product in a given plan, whether you will produce them at the same time or one after the other.

- Which days and hours you produce the selected products (you can specify one or more shifts per day).

- How often you enter production data and losses (e.g., hourly, daily, weekly, and so on).

As a result of these enhancements, the following specific changes have been made:

- The **Production Plan Management** page has been modified significantly. It now shows you a list of production profiles that are associated with the plan, summary information about the plan, and details of planned production for each period in the plan. From this page, you can create production plans using the new **Production Plan Builder**.

- The **Production Data Entry** page has been modified significantly. Now, you will see a separate production data tab for each product that is included in the production plan. On each production data tab, the **Period** column now displays the start and end dates/times for each period in the plan (versus just the date in previous releases). In addition, the **MSCR** column label has been changed to *Maximum Sustained Capacity*. On the **Production Summary** tab, the information in the **Production Data Details** pane has changed, and you will now see a grid with details for each product that is included in the production plan. Also, new categories and subcategories have been added above and below the Production Data Summary graph.

- The *Production Target* entity family and the *Has Production Target* relationship family have been created. The Has Production Target relationship family is used to relate the following families:

  - Production Plan (predecessor), Production Target (successor)

- Production Profile (predecessor), Production Target (successor)

The PLA Security Groups have been granted permissions to these new families as outlined in the following table.

	MI Production Loss Accounting Administrator	MI Production Loss Accounting Manager	MI Production Loss Accounting Service	MI Production Loss Accounting User
Production Target	View, Update, Insert, Delete	View	View	View, Update, Insert, Delete
Has Production Target	View, Update, Insert, Delete	View	View	View, Update, Insert, Delete

- The following fields have been added to the Production Profile family:

  - Production Rate UOM

  - Standard Batch Size

  - Standard Batch Cycle Time

- The System Code Table with the ID *MI_PLA_RATE_UOM* has been created to support the Production Rate UOM field in the Production Profile family.

- The following changes have been made to the Production Plan family:

  - The Plan ID field now displays the ID in the following format: *<Unit ID> - <Product 1>, <Product 2>, <Product n> ~ Plan End Time*

  - The Start Date and End Date fields are now read-only.

  - The following fields have been added to the Production Plan family:

o Plan Basis (The available values come from the new System Code Table with the ID MI_PLA_PLAN_BASIS.)

o Production Model (The available values come from the new System Code Table with the ID MI_PLA_PRODUCTION_MODEL.)

o Data Entry Frequency (The available values come from the new System Code Table with the ID MI_PLA_DATA_FREQ.)

- OEE Code records with the following Record IDs have been created:

  ▪ Setup/Clean Up

  ▪ No Demand

  ▪ No Feedstock or Raw Material

  ▪ Not scheduled for production

- The following Catalog queries have been modified:

  ▪ \\Baseline\Meridium\Modules\Reliability Manager\Analyses\All production Data

  ▪ \\Baseline\Meridium\Modules\PLA\Queries\EventList

- The Production Data and Equipment Costs Data cubes have been updated. Upgrading customers will need to deploy the updated cubes on the SQL Server Analysis Server.

- The calculations used in several of the pre-existing Metric Views have been updated. In addition, the following new Metric Views have been added:

  ▪ OEE - Availability

  ▪ OEE - Performance

  ▪ OEE - Quality

- The Max Sustained Capacity Rate field in the Production Profile family is now disabled and is no longer required.

- The following features are now obsolete:

  - The *End of Production Day* field in the Production Profile family. Although the field still exists, it has been removed from the datasheet. Now, the date and time of Xi Tag records will be compared with the start and end date/time of each period in the production plan, and the Production Data record will be created (or updated) automatically to store the data in that Xi Tag record.

  - The *Production Profile* field in the *Production Plan* family. Although the field still exists, it is no longer used.

  - The *Production Long Range Plan* family. Although the family still exists, records are no longer created in this family.

Impact on Upgrading Customers

After you upgrade to V3.6.0.0.0, you will notice the following changes in your existing PLA records.

Item	V3.6.0.0.0 Notes
Production Profile Records	The following default values will be set in all existing Production Profile records: • **Production Rate UOM:** Day • **Standard Batch Cycle Time:** 1 • **Standard Batch Cycle Size:** Set to the value in the Max Sustained Capacity Rate field
Production Plan records	The following default values will be set in all existing Production Plan records: • **Plan End Date:** Previous Plan End Date • **Plan Basis:** Time-based • **Production Model:** Concurrent • **Useful Production Time:** One shift per day, 24 hours a day, starting and ending at the End of Production Day in the associated Production Profile records • **Data Entry Frequency:** Daily • **Unit Key:** The associated Production Unit record's Entity Key

Item	V3.6.0.0.0 Notes
Production Unit Has Production Plan relationship	Production Unit and Production Plan records will be linked automatically through this relationship.
Production Target records	Production Target records will be created and linked automatically to the appropriate Production Plan records and Production Profile records. The following default values will be set in all new Production Target records: • **Quantity:** Calculated based upon how the associated production plan was configured in the version from which you are upgrading. ▪ If it was a *detailed* long range plan (i.e., different daily planned production values throughout the plan), the quantity is calculated using the following equation: Quantity = Sum of the Individual Planned Production Values ▪ If it was a *simple* long range plan (i.e., the same daily planned production values throughout the plan), the quantity is calculated using the following equation: Quantity = Simple Long Range Plan Value x Number of Days in the Plan • **Sequence:** 1 • **Start Time:** The associated plan's start date • **End Time:** The associated plan's end date • **Unit Key:** The associated Production Unit record's Entity Key

(TS IDs: 38046, 60345)

Asset Answers Integration

Beginning in V3.6.0.0.0, Failure Elimination users can now access Asset Answers from the Meridium APM Framework application. To facilitate this enhancement, the **Asset Answers** option has been added to the **Failure Elimination** submenu on the **Go To** menu. This option becomes available after an administrative user activates the new license *Asset Answers*.

In addition, in the Configuration Manager application, a new option, **Asset Answers URL**, has been added to the **Global Preferences** submenu on the **Tools** menu. This setting option allows you to define the URL for Asset Answers. The default value is *https://answers.assetanswers.com*. If you have configured

single sign-on for Asset Answers, you must replace this default URL with the one provided by Meridium, Inc. After you have completed the configuration, if single sign-on has been configured for Asset Answers, when you click the new **Asset Answers** option on the **Failure Elimination** submenu, Asset Answers will appear, and you will be logged in automatically. Otherwise, the Asset Answers login page will appear, prompting you to enter your credentials. (TS ID: 59634)

Asset Strategy

Asset Strategy Implementation (ASI)

To enhance integration between ASI and SAP, changes have been made so that when you select a value in the **Maintenance Strategy** field in a Maintenance Plan record, the following fields will be populated automatically with the corresponding values from SAP:

- Shift Factor for Late Completion

- Tolerance for Late Completion

- Shift Factor for Early Completion

- Tolerance for Early Completion

- Call Horizon

- Scheduling Indicator

- Factory Calendar

Note: If a field already contains a value, that value will *not* be overwritten.

(TS ID: 60236)

Mechanical Integrity

Thickness Monitoring (TM)

The following changes have been made to TML Analysis calculations:

- When the Factor Remaining Life Date is calculated for a TML that is currently below t-min, it is now set automatically to the Last Measurement Date that is associated with the TML.

- For TMLs at or below t-min, the Interval Next Inspection Date was previously set to the Projected T-Min Date. Now, the Interval Next Inspection Date is always calculated using the following equation:

  Interval Next Inspection Date = Last Measurement Date + Default Inspection Interval

- The Projected T-Min Date is used for the Scheduled Next Inspection Date *only* if neither the Interval Next Inspection Date nor the Factor Remaining Life Date is calculated for the TML.

These changes result in a more intuitive Scheduled Next Inspection Date. See the User Help for more information about how the Scheduled Next Inspection Date is calculated. (TS ID 56948)

mobileAPM

Beginning in V3.6.0.0.0, you can now take advantage of the *mobileAPM* feature, which lets you perform inspections and access equipment and location information using a mobile device. To access the mobileAPM application, you must use a supported mobile device, such as an Apple iPad, that contains the mobileAPM App.

Note: The Operator Rounds license is required to take advantage of mobileAPM functionality.

Resolved Issues

Installation, Upgrade, and System Administration

Database Upgrade Manager

The following issues existed in the Database Upgrade Manager in one or more previous releases and have been resolved in V3.6.0.0.0:

SQL Server and Oracle Issues

* When you click the **Check Setup** button on the **Connection Information** screen, the Meridium APM system compares the version of the Application Server software on that machine with the version in the database content file name, and if they do not match, you will not be able to proceed. Previously, the Meridium APM system compared every digit in these versions. Now, the Meridium APM system compares only the first three digits of the versions. This check will ensure that the main version of the Application Server software and the main version in the database content file match. Because the database content for a maintenance release is stored in a subfolder of the main version's database content folder, checking for only the main version ensures that the correct database content file is used for upgrades to a maintenance release. (TS ID: 60503)

* If you change the data type or field length of a field but do *not* manage the physical tables (i.e., change the metadata but not the physical structure), a discrepancy will exist between the physical database table and the metadata. When you upgrade a database that contains a discrepancy like this, the database upgrade process will resolve the discrepancy by changing the physical table structure to match the metadata (i.e., manage the physical tables for you). Previously, if your database contained discrepancies like this for your custom fields, your data may have looked different after the database was upgraded than before the database was upgraded. This issue has been resolved. Now, the database upgrade process will *not* attempt to resolve discrepancies like this for your custom fields. It will, however, continue to resolve discrepancies like this for baseline fields. (TS ID: 59810)

Oracle-Specific Issues

- Previously, if you upgraded an *Oracle* database *from* V3.5.0 or later *to* V3.5.1 (or any V3.5.1 maintenance release or patch), the Keyword Search index was not included in the upgrade process. Thus, you were not able to use keyword search functionality. This issue has been resolved in this release. (TS ID: 62033)

- The following issue existed only when you tried to upgrade an Oracle database. Previously, when you provided your username and password to connect to the database, the Database Upgrade Manager interpreted the password that you entered as being typed in all capital letters. If your password actually included one or more lowercase letters, the application indicated that your password was incorrect and could not connect to your database. As a result, you had to change your password temporarily to use all capital letters. This issue has been resolved. Now, you can connect successfully to an Oracle database, as expected. (TS ID: 60201)

- Previously, when you upgraded an *Oracle* database, errors occurred during the database upgrade process if the Oracle user who performed the upgrade was assigned the SELECT ANY TABLE privilege or other privileges that provide access to tables in other Oracle schemas (i.e., tables in addition to Meridium's). To avoid the errors, you had to revoke the additional privileges and then resume the upgrade process. This issue has been resolved. Now, when you upgrade your database to V3.6.0.0.0, these errors will not occur.

  This is an example of the error that occurred:

  ERROR running Oracle script ORA-00955: name is already used by an existing object.
  Line # 12
  Command with error: CREATE TABLE MI_DB_UPG_TRC_STEPS (STEP_KEY NUMBER(16),
  DBDT_KEY NUMBER(16),
  STEP_PROC_NM VARCHAR2(100),

STEP_NM VARCHAR2(4000),
STEP_START_DT DATE,
STEP_MSG_TYPE_CD VARCHAR2(10),
STEP_MSG_CD VARCHAR2(4000))

Note: This issue is resolved only if you are upgrading your database to V3.6.0.0.0 from *V3.5.1 or later*.

(TS ID: 60195)

Meridium APM Server and Add-ons Installer

Previously, while *Microsoft WSE 3.0 Runtime* was a required prerequisite for installing the Meridium APM Web Framework, the Meridium APM Server and Add-ons installer did not check for the presence of this component. This issue has been resolved. Now, the installer checks to see if *Microsoft WSE 3.0 Runtime* is installed on the machine. If it is not found, the installer displays a message, indicating that *Microsoft WSE 3.0 Runtime* was not found, and you cannot proceed with the installation process. If the software is found, no message is displayed and you can proceed. (TS ID: 54495)

Managing Translations

Previously, on the Sync Server machine, if you completed the following steps, the installer displayed an error message and then closed.

1. Uninstalled any of the following languages using the modify mode in the Meridium APM Server and Add-ons installer:

   - Portuguese

   - French

   - Dutch

   - Chinese

2. Tried to run the installer again in repair mode.

In addition, after you uninstalled the language(s) from the Sync Server, if you tried to view the **Add/Remove Applications** screen in the APM Mobile Framework (on the device), an error message was displayed, indicating that there was no application information available. Further, the log file contained an entry that indicated there was an error getting the XML data, and the Root element was missing. This was due to an issue with the Meridium APM Application Server and Add-ons installer. When you removed any of these languages via the modify mode, the ApplicationRegistration.XML file became corrupt.

This issue has been resolved. Now, if you follow the steps outlined above, the ApplicationRegistration.XML file will be updated successfully, and no other errors will occur as a result of the removed languages. (TS ID: 56486)

Meridium APM Adapter for SSRS

Previously, when installing the Meridium APM Adapter for SSRS, if the installer could not find the file *rsreportserver.config*, you could not browse to the file manually, and you were forced to close the installer. This issue has been resolved. Now, if the installer *cannot* find the file, the **Choose Destination Location** screen will now be displayed, the text box will be empty, and you can browse to the location of the file. (TS ID: 59385)

Applications

URL Manager

Associated Pages

Previously, when working with Associated Pages, if more than one item on a submenu was flagged as bold, one of the menu items would appear on the submenu as bold as expected, but the other bold items would not appear on the submenu at all. This issue has been resolved. Now, if you make more than one item on a submenu bold, all items will appear on the submenu. Only one of them will be bold, though (i.e., in the URL Manager, the first bold item in the list, from top to bottom, will be bold on the submenu). (TS ID: 60716)

APM Foundation

Security and Accessibility

Previously, if LDAP synchronization was enabled, when new Security Users were created, the LDAP User field was not populated for those users. In addition, the Password field was populated with an empty string. As a result, it was possible for someone to log in to a user's account if they knew that user's LDAP ID. This issue has been resolved. Now, the LDAP User field is populated, as expected, and the Password field is populated with a value. (TS ID: 54501)

Conditional Alerts

Previously, if you had conditional alerts set up to send alerts on an annual schedule, in some cases, it was possible for the system to generate an alert at the wrong time. This issue occurred when the following criteria were met:

- The date in the Last Date Processed field was within the current year.

- The conditional alert schedule was set to annual.

- The conditional alert strategy was run within the year following the year in the Last Date Processed field.

In this case, an alert was sent. The Meridium APM system compared the year values rather than the entire date value, which triggered the alert to be sent at the incorrect time.

For example, if the Last Date Processed value was *December 31, 2012*, and the conditional alert was processed next on January 1, 2013, the alert would be sent because the year in the Last Processed Date field value (2012) is less than the year in the current date (2013). Instead, the alert should not have been sent until *December 31, 2013* (one year later).

This issue has been resolved. Now, alerts that are set to operate on an annual schedule will be sent as expected. (TS ID: 60191)

Record Manager

Previously, when viewing a master/detail datasheet, the detail records that appear in a grid below the master record were not sorted in any particular order. This issue has been resolved. Now, the detail records are sorted by Record ID by default. (TS ID: 55559)

EAM Interfaces

SAP Interfaces

The following issues existed in the SAP Interfaces in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, if you configured an entry in the /MIAPM/PARAMS table to use an SAP PI Server, when you tried to execute the corresponding Work Management interface, an error message appeared, as shown in the following image.
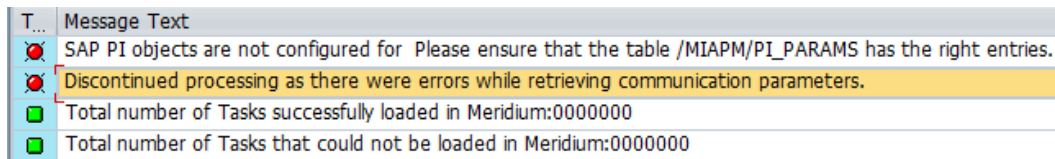
This issue has been resolved. (TS ID: 60904)

- Previously, when extracting Orders or Notifications from SAP, incorrect results were extracted if you filtered by any of the following SAP items:

  - Equipment Category

  - Equipment Type

  - Equipment Classification

This issue has been resolved. Now, when filtering by Equipment Category, Equipment Type, or Equipment Classification in SAP, the correct results are extracted. (TS ID: 60638, 60639)

- Previously, when extracting Orders or Notifications from SAP, items marked as inactive in SAP were incorrectly extracted if you filtered by any the following SAP items:

  - Work Order System Status

  - Work Order User Status

  This issue has been resolved. Now, when filtering by Work Order System Status or Work Order User Status in SAP, only items marked as active are extracted. (TS ID: 60637)

- Previously, when extracting Orders or Notifications from SAP, if you specified a wildcard (i.e., *) for the Maintenance Plant filter on the Meridium interface to extract <Item> screen in SAP, the correct records might not have been extracted. This issue has been resolved. Now, if you specify a wildcard value for the Maintenance Plant filter in SAP, the correct items are extracted. (TS ID: 60636)

- Previously, when extracting an Order from SAP, the **Order Type** field in the Work History record was populated with only the first 30 characters of the Order Type Description from SAP. This issue has been resolved. Now, when extracting an Order from SAP, the **Order Type** field is populated with the full Order Type Description from SAP. (TS ID: 60591)

- When using the SAP Interfaces, you can import baseline mappings from one SAP server to another. Previously, when exporting baseline mappings from the Work Management interface on one SAP server and then importing the mappings to another SAP server, an error message would appear, indicating that MI_TASK_CHANGE_DATE_D did not exist. This

issue has been resolved. Now, importing baseline mappings from one SAP server to another works as expected. (TS ID: 60589)

- Previously, when extracting Technical Characteristics from SAP, incorrect results were extracted if you filtered by Classification. This issue has been resolved. Now, when filtering by Classification, correct results are extracted. (TS ID: 60588)

- Previously, when extracting Orders from SAP, all Work Orders were extracted if you filtered by Work Order System Status. This issue has been resolved. Now, when filtering by Work Order System Status, only the filtered results are extracted. (TS ID: 60483)

- Suppose that your SAP system contains the Equipment items in the following hierarchy.
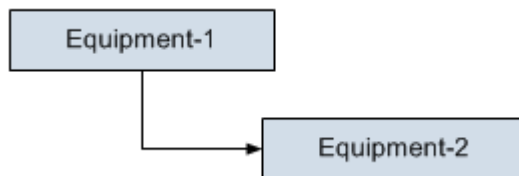
Previously, if you ran the Equipment Extraction Interface for *Equipment-1* after running the Equipment Extraction Interface for *Equipment-2*, the link between the two records in Meridium APM was deleted. This issue has been resolved. Now, the link between the two records will not be deleted. (TS ID: 60115)

- When you run an extraction interface, all of the items in the /MIAPM/EXCEPTIONS table should be processed in addition to the items that meet the specified search criteria. In previous versions, however, if you used the default values in the SAP date fields, only the items that matched the search criteria were processed. This issue has been resolved. (TS ID: 60112)

- Previously, for SAP Equipment or Functional Location items that already existed in Meridium APM, if you deleted the class from the item in SAP and then reran the extraction interfaces, the corresponding Technical Characteristic record in Meridium APM was not unlinked from the Equipment or Functional Location record. This issue has been resolved. Now, the corresponding Technical Characteristic record in Meridium APM will be unlinked from the respective record, as expected. (TS ID: 60140)

- Previously, the results of the Work History Detail Report included Notification Items that had been deleted from SAP. This issue has been resolved. The results of this report no longer include deleted items. (TS ID:59984)

- Previously, when running either the Equipment Technical Characteristics or Functional Location Technical Characteristics extraction report in SAP for the first time, any characteristics that failed to be extracted were added to the Exceptions table, as expected. The next time that you ran that same report, however, the interface would never stop running, and no characteristics would be extracted. This issue has been resolved. Now, when running these reports again after items have failed, the extraction process completes successfully. (TS ID: 59799)

- Previously, when running the Functional Location Extraction Interface in SAP, the **Cost Center Description** field was populated only when the corresponding Cost Center in SAP contained the value 31.12.9999 in the **Valid To** date field. This issue has been resolved. Now, the **Cost Center Description** field is populated according to the actual date range specified in the corresponding Cost Center. (TS ID: 59763)

- Previously, if you tried to create an SAP Notification from any Meridium APM Recommendation record, an error message similar to the following one appeared: *The function module "/MIAPM/CREATE_NOTIF" cannot be used for 'remote' calls*. This issue has been resolved. Now, you can

create a Notification in SAP from any Meridium APM recommendation, and the error message will not appear. (TS ID: 59713)

- Previously, in SAP, in the /MIAPM/TASK_CNF table, the following issues existed:

    - Multiple rows of criteria could not be specified for the same field.

    - Complex conditions did not always work as expected.

    These issues have been resolved. To facilitate these fixes, the following columns have been added to the /MIAPM/TASK_CNF table:

    - **Group ID**: Used to create groups of criteria within the condition that the /MIAPM/TASK_CNF table creates. When you assign the same Group ID to multiple rows in the /MIAPM/TASK_CNF table, the corresponding values are placed within parentheses in the resulting condition.

    - **Pos**: Used to specify the placement of the row's criteria within the corresponding group.

    In addition, the operators *IN* and *Not IN* have been added to the list of available options that you can select in the **Relational Operator** column.

    (TS IDs: 59544, 59545)

- Previously, in SAP, in the /MIAPM/TASK_CNF table, if you specified a field that was not already mapped to the Meridium APM system (via the **Field Mapping Parameters** screen in SAP), the table did not work properly. This issue has been resolved. Now, the /MIAPM/TASK_CNF table will work properly even if the field that you specify is not already mapped to Meridium APM.

    Note: This fix applies only to fields in the SAP tables *PLPO*, *PLKO*, and *PLAS*, which are the only tables that can be specified in the /MIAPM/TASK_CNF table.

(TS ID: 59543)

- Previously, in SAP, in the /MIAPM/TASK_CNF table, the column *Condition to Select Query* was incorrectly named. In addition, the help text that appeared when you pressed F1 with a field in this column selected was incorrect. These issues have been resolved. The column is now named *Value* because it contains the values that are used to create Meridium APM records. In addition, the correct help text now appears when you press F1. (TS ID: 59541)

- Previously, if you extracted multiple Orders or Notifications in SAP that had the same Equipment reference object, the equipment details were not passed to the Work History records in the Meridium APM Framework. This issue has been resolved. (TS ID: 59493)

- When viewing the long text for an SAP Notification created from a Recommendation record, the long text should appear in the default text editor. Previously, however, the following error message appeared: *Unable to call PC editor (unknown paragraph format <.*>).* This issue has been resolved. The long text now appears in the default text editor. (TS ID 59467)

- Previously, if you configured custom field mappings for fields in either of the baseline SAP tables *JEST* or *TJ02T*, when you executed the Work History Detail Report, the fields corresponding to your custom mappings were not populated. This issue has been resolved. Now, fields corresponding to your custom mappings are populated as expected. (TS ID: 59454)

- Previously, if you completed the following steps, the Value field was not populated in Meridium APM:

1. In SAP, you linked a Functional Location to a class that has a Characteristic set to *Multiple Values*.

2. You extracted the Functional Location in Meridium, and the Value field on the Technical Characteristic was populated.

3. In SAP, you modified the Characteristic to *Single Value*.

4. You updated the Functional Location in Meridium APM.

This issue has been resolved. Now, when completing these steps, the Value field in Meridium APM is populated correctly. (TS ID 59243)

- Previously, on the selection screen for all extraction reports *except* Work Management, the button that you can use to select values for the corresponding text box did not appear for the **Equipment Classification** or **Functional Location Classification** text boxes. This issue has been resolved. The button now appears for these text boxes. (TS ID: 58965)

- Previously, if you extracted an SAP Equipment item that was related to a Functional Location and that also was related to another Equipment item that was not related to the same Functional Location, in Meridium APM, both Equipment records were linked to the Functional Location record. Instead, only the first Equipment record should be linked to the Functional Location record. This issue has been resolved. Now, the second Equipment record is not linked to the Functional Location record in this scenario. (TS ID: 58516)

- Previously, for all extraction interfaces in SAP, if you specified a wildcard (i.e., *) for the Maintenance Plant filter and you executed the report in simulation mode, the **Filtered Plants** list on the **Simulation Results** screen was both incomplete and contained incorrect values. This issue has been resolved. The **Filtered Plants** list is now complete and contains the correct values. (TS ID: 55005)

- Previously, when extracting Technical Characteristics from SAP, if the value for a characteristic was defined by the value in another SAP field (rather than by a static, user-defined value), the characteristic's value was not extracted. This issue has been resolved. Now, all characteristics are extracted as expected. (TS ID: 51207)

Oracle EBS eAM Interfaces

The following issues existed in Oracle EBS eAM Interfaces in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, when you extracted items from Oracle eAM, if you extracted a large number of items (i.e., more than the value defined in the MAX_ROWS field in the corresponding CMMS Mapping record), not all of the items were imported into Meridium APM. This issue has been resolved. Now, when you extract a large number of items, all items are imported into Meridium APM, as expected. (TS ID: 57137)

- Previously, when running an Oracle eAM extraction interface, whether or not debug tracing is enabled (via the **Enable Debug Tracing** check box in the corresponding CMMS Interface record), the interface logged unneeded information. This used a large amount of memory and, if you tried to extract a large number of items, caused the interface to crash. This issue has been resolved. Now, when you disable debug tracing, the interface logs only the needed information. This reduces the amount of memory used and prevents the system from crashing. (TS ID: 57136)

Risk and Risk Assessment

Previously, an incorrect tooltip appeared if the following modifications were made to the baseline Risk Matrix:

- Consequence was displayed on the y-axis.

- The Risk Matrix contained more Consequences than Probabilities.

For example, when you pointed to the cell with a Consequence of *Very High* and a Probability of *5*, the tooltip *Add New Consequence* appeared, rather than the value that is defined in the Risk Threshold record. This issue has been resolved. Now, when the baseline Risk Matrix is modified using these criteria, the correct tooltip appears. (TS ID: 55494)

Core Analysis

Dashboards

The following issues existed with the Dashboards feature in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, if you defined filters in the **Content Filters** section on *any* dashboard and then navigated away from and back to the dashboard (e.g., you clicked a link on the dashboard and then clicked the **Back** button) *or* refreshed the dashboard, the values that you defined in the **Content Filters** section were *not* retained. This issue has been resolved. (TS ID: 61412)

- Previously, when you tried to view the Criticality Distribution - Current Category Chart section on the Foundation dashboard in an Oracle database, an error message appeared. This happened because the underlying query Criticality Distribution - Current (Chart) contained a keyword that is not supported in Oracle databases. This issue has been resolved. A new query has been delivered that is compatible with both Oracle and SQL Server databases. (TS ID: 60190)

- Previously, when you accessed the APM Foundation dashboard, an error message appeared in the **Criticality Distribution - Current** section, indicating that the query *\\Public\Meridium\Modules\Core\Queries\Dashboard Queries\Criticality Distribution - Current (Chart)* could not be run. This issue has been resolved. A new query has been delivered to replace the query that caused the error message, and the error message no longer appears. (TS ID: 59744)

- Previously, when you modified the Query Parameters of a dashboard section that was linked to the **Content Filter** section, the Query Parameters did not behave as expected. For example, the settings you selected might not have persisted after you navigated away from edit view, or selecting **ALL** for one parameter might not have reset the parameters below it to **ALL** like it should have. In addition, the settings that you selected on the **Content Filter** section were reset after you navigated away from the Dashboard and returned to it. These issues have been resolved. Now, Query Parameters behave as expected and settings for Dashboards are saved as a preference. This means that the **Dashboard** settings you select will persist, even if you navigate away from the **Dashboard** or close the Meridium APM Framework application. (TS ID: 58476)

- Previously, for the following dashboard sections, when you specified a source query that contained a prompt that accepted more than one value, an error message appeared:

  - **List - Query Result**

  - **List - Single Column**

  This issue has been resolved. Now, when you specify a source query that contains a prompt that accepts more than one value, no error message appears, and you can select more than one value in the **Query Parameters** pane. (TS ID: 49100)

Datasets

Previously, if you tried to delete multiple rows from a dataset, the rows that were deleted may not have been the ones that you selected. In addition, if you tried to delete multiple rows that included the last row (or any of the last few rows), an object reference error message appeared. These issues have been resolved. Now, you can delete multiple rows from a dataset as expected. (TS ID: 60303)

Query Results

Previously, if the following criteria were met, when you tried to apply a basic filter to query results, only the *Custom*, *Blanks*, and *Non Blanks* options appeared in the list of filters. In other words, you could not filter by any of the values that were returned in a given column.

- A data filter was applied to the family or field that was returned by a query.

- You were logged in as a Security User that is not a Super User.

For example, if a query returned three rows, *A1*, *A2*, and *A3*, when you tried to apply a basic filter to the column, the *A1*, *A2*, and *A3* values were *not* displayed in the filter list. Instead, only the *Custom*, *Blanks*, and *Non Blanks* options were displayed in the list.

This issue has been resolved. Now, you can apply a basic filter to a column in the query results using any of the values that are returned in the rows in that column. (TS ID: 60189)

Online Analytic Interfaces

Process Data Integration (PDI)

The following issues existed in Process Data Integration in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, if a time zone was not configured for the Security User whose credentials you specified in the file Meridium.PDI.Service.exe.config, errors would occur. This issue has been resolved. Now, if a time zone is not configured for the Security User, the PDI service will use UTC time. (TS ID: 51180)

- Previously, the **Process Data Viewer** window displayed dates and times using the time zone of the Meridium APM Framework machine rather than the time zone that was configured for the user. This issue has been resolved. Now, the **Process Data Viewer** window displays dates and

times in the time zone configured for the Security User, as expected. (TS ID: 51129)

- Previously, in the file Meridium.PDI.Service.exe.config, if you did not specify any Xi System records (using the XiServers key), the Meridium.PDI.Service service would not start. This issue has been resolved. Now, if you do not specify any Xi System records, the Meridium.PDI.Service service will process *all* Xi System records in the Meridium APM database, as expected. (TS ID: 51113)

- Previously, in the file Meridium.PDI.Service.exe.Config, within the <**meridiumConnections**> tags, within the **applicationServer** attribute, if you did not replace *localhost* with the name of the Meridium APM Application Server, the PDI Service used a local connection to Meridium APM Application Server. Now, if you do not replace localhost, the server will use a remote connection, which requires the Application Server to be installed on the same machine as the PDI Server. It is recommended, however, that you always specify the name of the Meridium APM Application Server. (TS ID: 43159)

AMS Analytics

The Recommended Actions field in AMS Asset Event records can accept multiple values. When these values are transferred to the Meridium APM system from the AMS Analytics data source, they are separated by semicolons (;). The Meridium APM system uses the semicolons to display line breaks between the individual values (so that each value is displayed on its own line). Previously, if only *one* value was transferred to the Recommended Actions field in Meridium APM, it was not transferred with a semicolon. As a result, the Meridium APM system did not save the value. Instead, it was discarded. This issue has been resolved. Now, if only a single value is transferred to the Recommended Actions field in Meridium APM, it will be saved as expected. (TS ID: 60184)

Policy Manager

The following issues existed in Policy Manager in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, if you created a policy with an Xi Tag node as a trigger for the policy and, in a policy instance, specified an Xi Tag record already associated with a Health Indicator, a new DA or HDA reading did *not* trigger the policy. This issue has been resolved. (TS IDs: 60306, 60316)

- Previously, if an Equipment record was specified in the **Equipment ID** section of the **Properties** window for a Create Recommendation node, when the Create Recommendation node was executed, the Equipment record was not linked to the newly created Policy Recommendation record. This issue has been resolved. The specified Equipment record is now linked to the Policy Recommendation record as expected. (TS ID: 60278)

- Previously, if you created a policy with an Xi Tag as an input for the policy and, in a successor node, selected a field on the XI Tag as an input, if the policy was triggered by a new DA or HDA reading, no value was returned for the XI record field and no error message was displayed. This issue has been resolved.

  Note: This issue did not affect the following fields: DA Reading Value, DA Readings Timestamp, and HDA Readings. If you selected one of these fields as an input for a successor node, values were returned as expected.

  (TS ID: 59832)

Operator Rounds

The following issues existed in Operator Rounds in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, when you tried to add a Template Group to a Route, it was not added, and an error message appeared. The specific error message that was displayed depended upon whether the Template Group included Conditions or not.

- If the Template Group included Conditions, the error message indicated that a value was not found in the picklist.

- If the Template Group did not include Conditions, an object reference error was displayed.

This issue has been resolved. Now, you can add Template Groups to a Route as expected. (TS ID: 60186)

- Previously, when you tried to add a Template group to a Route, it was not added, and an error message appeared. The error message indicated that a given value was not valid. This issue has been resolved. (TS ID: 60185)

- Previously, the barcode functionality in Operator Rounds did not function properly on a *Motorola MC9500-k series* device. This issue has been resolved. Barcode functionality now works as expected on a *Motorola MC9500-k series* device. (TS ID: 58706)

- The Measurement Locations in Alert – Oracle and Measurement Locations in Alert – SQL Server queries are no longer used and have been removed from the following Catalog folders:

  - \\Public\Meridium\Modules\Operator Rounds\Queries

  - \\Baseline\Meridium\Modules\Operator Rounds\Queries

  When you upgrade your database to V3.6.0.0.0, these queries will be removed automatically from your database. (TS IDs: 59487, 59108)

- The Reading History query is no longer used and has been removed from the following Catalog folders:

  - \\Public\Meridium\Modules\Mobile\Operator Rounds

- \\Baseline\Meridium\Modules\Mobile\Operator Rounds

- \\Public\Meridium\Modules\Operator Rounds\Queries\Download Queries

- \\Baseline\Meridium\Modules\Operator Rounds\Queries\Download Queries

When you upgrade your database to V3.6.0.0.0, these queries will be removed automatically from your database. (TS IDs: 32386, 59108, 59965)

- The Download to Handheld query is no longer used and has been removed from the following Catalog folders:

  - \\Public\Meridium\Modules\Operator Rounds\Queries

  - \\Baseline\Meridium\Modules\Operator Rounds\Queries

  - \\Public\Meridium\Modules\Operator Rounds\Queries\Download Queries

  - \\Baseline\Meridium\Modules\Operator Rounds\Queries\Download Queries

When you upgrade your database to V3.6.0.0.0, these queries will be removed automatically from your database. (TS IDs: 27832, 59108, 59965)

Recommendation Management

Previously, an error message appeared when you attempted to link to a Recommendation record an existing Task record whose Task ID field contained more than 50 characters. For more details about this issue, see the Risk Based Inspection (RBI) - V3.6.0 Resolved Issues. To resolve this issue, the Edit Length for the Meridium Task ID field in the Recommendation family has been increased to 255 characters. (TS ID: 51792)

Asset Health Manager (AHM)

The following issues existed in Asset Health Manager in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, in SQL Server databases, for each Health Indicator node, the **Health Indicator Explorer** pane displayed the value in the Health Indicator ID field instead of the Record ID. This issue has been resolved. The **Health Indicator Explorer** pane now displays Record IDs for each Health Indicator node. (TS ID: 60718)

- Previously, when you used the **Mass Health Indicator Builder** to create Health Indicators for a large number of records (e.g., more than 100), the builder displayed an error message, and the Health Indicators were not created. This issue has been resolved. You can now use the **Mass Health Indicator Builder** to create a large number of Health Indicators.

   Note the following information about using the **Mass Health Indicator Builder**:

   - To create Health Indicators for more than 100 records, you may need to increase the transaction time-out settings in the files web.config and machine.config. For additional information, see the known issue recorded for TS ID: 58879.

   - The speed of Health Indicator creation decreases as the number of Health Indicators requested increases. Depending on the number of existing readings for the Health Indicators requested, creating between 2,000 and 5,000 Health Indicators at one time should provide optimum performance.

   (TS ID: 60423)

- Previously, for Health Indicator records created via Policy Manager, if you modified a Health Indicator record in Asset Health Manager at the same time that the Meridium APM system was creating a new Health

Indicator Value record associated with the Health Indicator record, the Health Indicator Explorer Pane stopped responding and, if you clicked on the root node, an error message appeared. Now, if you try to modify a record in this situation, a warning message appears that prompts you to try to save the record again. You will be able to save the record successfully when the Meridium APM system is no longer modifying the record. (TS ID: 60301)

- Previously, when using Meridium APM in certain Remote Desktop environments, an error occurred when you moved your pointer over the graph on the **Trend** tab on the **Asset Health Manager** page. This issue has been resolved. Now, in this scenario, no error occurs, and the graph is displayed as expected. (TS ID: 62240)

- Previously, non-compliant readings for character Measurement Locations (i.e., readings from related Reading records where the Reading Value field is empty and the Status value is *NC*) appeared on the **Asset Health Manager** page with the status *Normal*, represented by a green circle. This issue has been resolved. Now, non-compliant readings have no Health Indicator status and do not affect the Alert status shown in the **Health Indicator Explorer** pane. (TS ID: 59588)

- Previously, when you modified the limit values of an existing Health Indicator, the position of the black triangle on the corresponding gauge on the **Asset Health Manager** page was not updated immediately. This issue has been resolved. Now, when you modify the limit values of a Health Indicator, the position of the black triangle will be updated immediately. (TS ID: 57278)

Failure Elimination

Production Loss Accounting (PLA)

The following issues existed in PLA in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, members of the following Security Groups could not open the PLA Metric Views:

  - MI Production Loss Accounting Administrator

  - MI Production Loss Accounting Manager

  - MI Production Loss Accounting User

  This issue existed because these Security Groups did not have View privileges to the SSAS Server family. This issue has been resolved. These Security Groups have been granted View privileges to the SSAS Server family. (TS ID: 60810)

- Previously, if you were a member of the *MI Production Loss Accounting Service* or *MI Production Loss Accounting User* Security Group, when you selected an OEE Code when recording a production loss, an error message appeared. This issue occurred because these Security Groups had only View privileges to the Has OEE Code relationship family. This issue has been resolved. Now, these Security Groups have View, Update, Insert, and Delete privileges to the Has OEE Code relationship family. (TS ID: 60640)

Asset Strategy

Asset Strategy Management (ASM)

The following issues existed in ASM in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, when importing Asset Strategies from Microsoft Excel files, if the values that you mapped to the Strategy ID field in Asset Strategy records were formatted as anything other than String or Text, an error message appeared during the import procedure. This issue has been resolved. (TS ID: 61421)

- Previously, when importing an SAP Task List that contained an Operation, the currency value for the Operation was not transferred to the Meridium APM Operation record. This issue has been resolved. The currency value is now transferred to the Meridium APM Operation records as expected. (TS ID: 60704)

- Previously, when you imported an SAP Maintenance Plan that contained an Operation with a Sub-Operation, in the Meridium records for the Operation and Sub-Operation, the **Long Text** field was populated with the long text values for *both* the Operation and Sub-Operation. This issue has been resolved. The **Long Text** field in each record is now populated with the long text for the Operation *or* the Sub-Operation, respectively. (TS ID: 60487)

- Previously, when you used the **Asset Strategy Builder** to import an SAP Task List item that had a PRT, the Control Key value for the PRT was not imported. This issue has been resolved. Now, the Control Key value is imported as expected. (TS ID: 60211)

- Previously, when you used the **Asset Strategy Builder** to import Task List items from SAP, the **Select SAP Work Management Item(s)** screen did not display all of the SAP Task List items that were linked to the specified Equipment or Functional Location record. This issue has been resolved. Now, the builder displays all SAP Task List items that are linked to the specified record. (TS ID: 60169)

- Previously, if using both the SIS Management and ASM modules, members of the following Security Groups could not open Asset Strategies:

  - MI ASM Analyst

  - MI ASM Reviewer

▪ MI ASM Viewer

This issue existed because these Security Groups did not have View privileges to certain families. This issue has been resolved. These Security Groups have now been granted View privileges to the Was Promoted to ASM Element family, and the ASM Viewer Security Group was also granted View privileges to the Inspection Task family. (TS ID: 59339)

- Previously, when you import an Asset Strategy from SAP, on the **Select SAP Object(s)** screen, Site Reference records were listed in the order they were created. This issue has been resolved. Now, in the **Select Site Reference** list, Site Reference records are listed alphabetically by name, as expected. (TS ID: 57778)

- Previously, when importing SAP Task Lists and Operations into ASM, if the long text contained more than 40 characters, the line breaks would not appear as they did in SAP. This issue has been resolved. Now, when importing SAP Task Lists and Operations into ASM, the long text is displayed at 40 characters per line, as it is by default in SAP. (TS ID: 57380)

- Previously, on the **ASM - Asset Strategy Search** page, if you right-clicked a strategy or template ID link and then closed the shortcut menu without clicking an option, when you clicked any strategy or template ID link again, an error message appeared. The **Error** window continued to appear each time that you clicked a strategy or template ID link. This issue has been resolved. Now, if you open the shortcut menu but do not click an option, the next time that you click a strategy or template ID link, no error message appears, and the strategy or template opens as expected. (TS ID: 56898)

- When you import a strategy from SAP using the **Asset Strategy Builder**, on the **Select SAP Object(s)** screen, results are returned based on the selections you make in the **Select Site Reference** list and the **Select SAP**

Object Type list. If, however, you modify the query *Locate Assets by Site Reference for Import* to include prompts when you perform the import procedure, it is possible to show a second **Site Reference** list, as shown in the following image:

If you selected a Site Reference record in the **Site Reference** list but you did *not* select a Site Reference record in the **Select Site Reference** list, an object reference error message would appear. In previous versions, however, there was no way to hide the **Site Reference** prompt. This issue has been resolved. Now, a new query has been delivered to replace the old query. The new query contains the new attribute *:h*, as shown in the following image:

The *:h* attribute hides the **Site Reference** and **Functional Location** parameters, as expected, so that they do not appear on the **Select SAP Object(s)** screen. Therefore, if you modify this query, you should make sure that the *:h* attribute is in the indicated parameter before you run the query. (TS ID: 54695)

Asset Strategy Implementation (ASI)

The following issues existed in ASI in one or more previous releases and have been resolved in V3.6.0.0.0:

- When you revise an Implementation Package, you should not be able to modify the value in the Category field in a Maintenance Plan record. Previously, however, the Category field was enabled. This issue has been resolved. Now, when you revise an Implementation Package, the Category field in Maintenance Plan records is disabled. (TS ID: 60709)

- Previously, if you imported into ASM an SAP Maintenance Plan that had a Counter value, the Counter field was not populated for the resulting Implementation Package in ASI. This issue has been resolved. (TS ID: 60594)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, an error message appeared:

    1. You created a Notification record.

    2. For that record, you added a Functional Location that uses alternative labeling (i.e., one whose internal ID begins with *?*).

    3. You implemented the Implementation Package.

    4. You revised the Implementation Package and modified either the short text or the description.

    5. You updated the Implementation Package (i.e., you sent the modification back to SAP).

    The error message said that the Functional Location ID was not valid. This issue has been resolved. Now, when completing these steps, no error message appears. (TS ID: 60593)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, the Functional Location Label field was not populated:

    1. You created a Maintenance Item, Task List, Object List, or Notification record.

    2. From that record, you searched for a Functional Location in SAP.

    3. In the **Select a Functional Location** dialog box, in the **ID** text box, you used a wildcard, such as the default value *.

    4. You clicked the **Search** button.

5. You selected a Functional Location that uses alternative labeling (i.e., one whose internal ID begins with ?), and you clicked **OK**.

This issue has been resolved. Now, when completing these steps, the Functional Location Label field is populated. (TS ID: 60592)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, incorrect search results were returned:

    1. You created a Maintenance Item record.

    2. From that record, you searched for a Functional Location in SAP.

    3. In the **Select a Functional Location** dialog box, in the **ID** text box, you searched for a Functional Location that uses alternative labeling (i.e., one whose internal ID begins with ?).

    4. You clicked the **Search** button.

    This issue has been resolved. Now, when searching for a Functional Location using the criteria listed above, the relevant Functional Locations are displayed. (TS ID: 60590)

- When a Material record is linked to an Implementation Package that has been implemented, you should not be able to modify the Material Number. In previous versions, however, you could modify the Material Number via the **Select a Material** dialog box (which appeared when you click the [...] button in the **Material Number** cell). This issue has been resolved. Now, when a Material record is linked to an implemented Implementation Package, you cannot access the **Select a Material** dialog box. (TS ID: 60243)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, the Work Center, Work Center

Plant, Planning Plant, and Maintenance Planner Group fields were not populated:

1. You created a Maintenance Item or Task List record.

2. From that record, you searched for a Functional Location in SAP.

3. In the **Select a Functional Location** dialog box, in the ID text box, you used a wildcard, such as the default value *.

4. You clicked the **Search** button.

5. You selected a Functional Location that uses alternative labeling (i.e., one whose internal ID begins with ?), and you clicked **OK**.

This issue has been resolved. Now, when completing these steps, the related fields are populated as expected. (TS ID: 60160)

- Previously, if a Task List record was linked to an Operation record and no value was specified in the Maintenance Strategy field for the Task List record, if you linked a Maintenance Package record to the Operation record, an error message appeared. This happened because SAP does not support linking a Maintenance Package to an Operation record if the parent Task List record does not have a Maintenance Strategy value. This issue has been resolved. You can no longer link a Maintenance Package record to an Operation record unless the parent Task List record has a Maintenance Strategy value. (TS ID: 60151)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, the long text was not correctly updated in SAP:

1. You implemented an Implementation Package that contained a Maintenance Plan, Maintenance Item, Task List, or Operation record.

2. You revised the Implementation Package and deleted the values in the **Long Text** field of the Maintenance Plan, Maintenance Item, Task List or Operation record, respectively.

3. You updated the Implementation Package (i.e., you sent the modification back to SAP).

This issue has been resolved. Now, when completing these steps, the long text is removed from the corresponding items in SAP. (TS ID: 60143)

- When working with an Implementation Package, in Maintenance Item records, the values in the Planning Plant, Work Center, and Work Center Plant fields should come from the associated SAP Equipment or Functional Location item. In previous versions, however, if the Maintenance Item record was associated with an SAP Equipment item that had a parent Functional Location, the values in these fields would come from the parent SAP Functional Location instead. This issue has been resolved. Now, the values in the Planning Plant, Work Center, and Work Center Plant fields come from the associated SAP Equipment item, as expected. (TS ID: 60119)

- Previously, if you completed the following steps in the following order, the Implementation Package was implemented successfully after the last step, but an object reference error message appeared:

  1. Import a Task List from SAP.

  2. Revise the Implementation Package and reimplement the Implementation Package via the Update operation.

  3. Delete all child work item records in the Implementation Package.

  4. Reimplement the Implementation Package.

  This issue has been resolved. (TS ID: 60063)

- In an Implementation Package, if you modify the value in the Maintenance Strategy field in a Maintenance Plan record, that value will be copied to the Maintenance Strategy field in the successor Maintenance Item and Task List records. In previous versions, however,

if you completed the following steps in the following order, this value was not copied to the successor Maintenance Item and Task List records:

1. Delete the value in the Maintenance Strategy field in a predecessor Maintenance Plan record.

2. Modify a value in a field on another tab.

3. On the **Header** tab for the predecessor Maintenance Plan record, change the value in the Maintenance Strategy field back to the value that you specified originally.

This issue has been resolved. Now, when you modify the value in the Maintenance Strategy field in a predecessor Maintenance Plan record, that value is copied to the Maintenance Strategy field in the successor Maintenance Item and Task List records, as expected. (TS ID: 60062)

- Previously, if you completed the following steps when working with an Implementation Package record in ASI, an error occurred and the corresponding item was not updated in SAP:

1. You created a Task List or Operation record.

2. For that record, you did not specify any values in the **Long Text** field.

3. You implemented the Implementation Package.

4. You revised the Implementation Package and modified the value in the **Long Text** field of the Task List or Operation record, respectively.

5. You updated the Implementation Package (i.e., you sent the modification back to SAP).

This issue has been resolved. Now, when completing these steps, no error occurs and the corresponding item is updated in SAP as expected. (TS ID: 60054, 60239)

- Previously, the **Select a Work Center** dialog box (which appears when you click the [...] button in the **Work Center** cell on the Maintenance Item datasheet) did not contain the option to search by ID. This issue has been resolved. The **Select a Work Center** dialog box now contains an **ID** text box that you can use to specify search criteria. (TS ID: 60032)

- Previously, on the **Select an Functional Location** dialog box (which appears when you click the [...] button in the **Functional Location** cell on a Maintenance Item, Task List, Object List Item, or Notification datasheet), if you searched for an SAP Functional Location by typing a valid functional location description, no results were returned. This issue has been resolved. Now, when you search for a Functional Location by typing a valid description, the relevant search results are returned. (TS ID: 60027)

- Previously, on the **Select an Equipment** dialog box (which appears when you click the [...] button in the **Equipment** cell on a Maintenance Item, Task List, Object List Item, or Notification datasheet), if you searched for an SAP Equipment item by typing a valid equipment description, no results were returned. This issue has been resolved. Now, when you search for an Equipment item by typing a valid description, the relevant search results are returned. (TS ID: 60024)

- Previously, on the **Select a Cost Element** dialog box (which appears when you click the [...] button in the **Cost Element** cell on the Operation datasheet), if you specified search criteria in the **Description** text box, incomplete search results were returned. This issue has been resolved. Now, when you search by typing a valid description, all relevant search results are returned. (TS ID: 60004)

- Previously, if you specified a description for an item in SAP using a language other than the language you are using in Meridium APM, when you searched for SAP items by clicking the [...] button in a cell, those

items were not returned in the search results. This issue has been resolved. (TS ID: 59992, 60008, 60014, 60015, 60231, 60414)

- Previously, the list of strategies on the **Select a Maintenance Strategy** dialog box (which appears when you click the ⬚ button in the **Maintenance Strategy** cell on the Maintenance Item datasheet) may have included strategies that are not supported by ASI (i.e., strategies for which the Scheduling Indicator is Multiple Counter). This issue has been resolved. The **Select a Maintenance Strategy** dialog box now displays only the strategies supported by ASI. (TS ID: 59987)

- Previously, if the following criteria were met in an SAP system running ECC 6 EhP 6, an error message appeared:

  - You imported a Maintenance Plan into ASM.

  - You created an Implementation Package in ASI and then modified the Maintenance Plan or any item below it in the tree structure (e.g., you modified a value in a successor Maintenance Item record or Task List record).

  - You tried to update the SAP Maintenance Plan using ASI (e.g., via the *Implement* operation).

  This issue has been resolved. SAP updates from ASI now work as expected on SAP systems running ECC 6 EhP 6. (TS ID: 59936)

- Previously, in ASI, if you deleted a Task List from a Maintenance Item in an implemented Implementation Package, the SAP Task List would not be unlinked from the SAP Maintenance Item. This issue has been resolved. Now, when you delete a Task List in the preceding scenario, the SAP Task List is also unlinked from the SAP Maintenance Item. (TS ID: 59935)

- Previously, if the following criteria were met when working with an Implementation Package record in ASI, an error message appeared:

  - You created a Notification, Maintenance Item, Object List Item, or Task List record.

  - From that record, you searched for a Functional Location in SAP.

  - In the **Select a Functional Location** dialog box, in the **ID** text box, you used a wildcard, such as the default value *.

  - You clicked the **Search** button.

  The error message stated that *Functional location * does not exist*. This issue has been resolved. Now, when searching for a Functional Location using the criteria listed above, all Functional Locations are displayed. (TS ID: 59714)

- Previously, if the following criteria were met, an error message appeared:

  - You packaged an Implementation Package and implemented it by sending it to SAP.

  - You then modified an Asset Strategy in the package and updated it (via the Update operation).

  The error message indicated that the operation failed because Data objects in Unicode programs cannot be converted. This issue has been resolved. Now, when you update an Asset Strategy that is part of an Implementation Package that you have sent to SAP, the items are updated in SAP, as expected. (TS ID: 59712)

- Previously, if the following criteria were met, a check box in SAP would incorrectly indicate that a Long Text value existed when one did not:

  - In an Implementation Package that has a Task List record, you created an Operation record.

- You did not specify a value for Long Text for either the Task List record or the Operation record.

- You implemented the Implementation Package.

- You modified the values in the Description fields in the Task List and Operation records.

- You updated the corresponding Task List to SAP.

This issue has been resolved. Now, SAP correctly identifies whether Long Text exists in the preceding scenario. (TS ID: 59468)

- Previously, if the following criteria were met, the SAP Task List's Description and Long Text fields were replaced by the Operation's Description and Long Text values from Meridium APM, and the SAP Operation's Long Text field was empty:

  - You created a Task List record and provided values in the Description and Long Text fields.

  - You created an Operation record and provided values in the Description and Long Text fields, but you did not provide a value in the Operation field.

  - You implemented the Implementation Package.

  This issue has been resolved. Now, when you create an Operation record, the Operation field is populated automatically with a default value, and the SAP Task List Description and Long Text fields and the SAP Operation Long Text field are populated with the values from Meridium APM, as expected. (TS ID: 59458)

- When creating Operation records in the Meridium APM system, you can specify that an Operation record is a Sub Operation by using the Sub Operation field. Previously, if a Task List record was linked to an Operation record representing a Sub Operation, if you linked a Maintenance Package, Material, or PRT record to that Operation record and implemented the Implementation Package, the SAP Task List was

not associated with the Technical Object. This happened because SAP does not support linking a Maintenance Package, Material, or PRT to a Sub Operation. This issue has been resolved. You can no longer link a Maintenance Package, Material, or PRT record to an Operation record representing a Sub Operation. (TS ID: 58015, 60077, 60078)

- Previously, a warning message would appear if the following criteria were met:

    - You created a primary Implementation Package and added an Asset Strategy to it.

    - You built a Work Management Item from an Action in the primary Implementation Package.

    - You transferred unpackaged Actions from the Asset Strategy in the primary Implementation Package to a secondary Implementation Package.

    - You implemented the primary Implementation Package.

    - In the secondary Implementation Package, you tried to remove the Asset Strategy.

    The warning message stated that *There are some Asset Strategies that cannot be removed because one or more of the Actions have been implemented.* This issue has been resolved. (TS ID: 57721)

- Previously, if you searched for an SAP work center by typing a valid work center category on the **Select a Work Center** dialog box (which appears when you click the ⋯ button in the **Work Center** cell on the Task List datasheet), no results were returned. This issue has been resolved. Now, when you search for an SAP work center by typing a valid work center category, the proper search result is returned. (TS ID: 54621)

- When implementing an Implementation Package that contains a new PRT, the **Item Number**, **Document Part**, and **Document Version** fields should be populated automatically when the Implementation Package is implemented successfully. In a previous release, however, those fields were populated only if the Implementation Package *failed* to implement successfully. This issue has been resolved. Now, those fields will be populated when the Implementation Package that contains a new PRT is implemented successfully. (TS ID: 54460)

- Previously, if you used the **Implementation Package Builder** to build an Implementation Package (by selecting **Actions are Operations**) or built a Maintenance Item or Notification directly from an unpackaged Action, the **Reference Object** tab and associated values (Work Center, Work Center Plant, Planning Plant, and Maintenance Planner Group) would not be populated correctly if the underlying Asset Strategy record was linked to a Functional Location record that was not linked to an Equipment record. This issue has been resolved. Now, the **Reference Object** tab is populated, as expected. (TS ID: 54439)

- Previously, on the **Select a Counter** dialog box (which appears when you click the button in the Work Center cell on the Maintenance Plan datasheet), if you specified search criteria in either the **Equipment** text box or the **Functional Location** text box, incorrect search results were returned. This issue has been resolved. Now, when you search by SAP Equipment or Functional Location, the proper search result is returned. (TS ID: 53033)

- Previously, on the **Packaging** page, if you selected the **Unpackaged Actions** tab and then immediately right-clicked any row in the grid, the shortcut menu did not appear. This issue has been resolved. (TS ID: 52867)

RCM and FMEA

Previously, if you created an RCM Template from an existing RCM Analysis, any Human Resources records that made up the **Team Member** list are removed from the RCM Analysis. This issue has been resolved. Now, when you create an

RCM Template from an existing RCM Analysis, the team members appear in both the RCM Analysis and in the RCM Template. (TS ID: 59449)

Mechanical Integrity

Thickness Monitoring (TM)

The following issues existed in TM in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, when you had an open Thickness Measurement record, every time that you selected the Readings ellipsis button, the value in the Thickness Measurement field was erroneously multiplied by 25.4. This issue has been resolved. Now, if you have an open Thickness Measurement record and you select the Readings ellipsis button, the value in the Thickness Measurement field will not be effected. (TS ID: 72867)

- Previously, an issue existed in TM Analyses when adjusted corrosion data was used to populate fields in a TML Corrosion Analysis or Asset Corrosion Analysis record. The details of this issue are described here as two separate issues based upon the level at which adjusted corrosion data was calculated for your TM Analysis:

  - The TML level (where values are populated in a TML Corrosion Analysis record).

    -or-

  - The TML Group level (where values are populated in an Asset Corrosion Analysis record).

When adjusted corrosion data was calculated for a TML

To understand this issue, it is important to understand the circumstances under which adjusted corrosion data is calculated for a TML, or when the following fields are populated in the TML Corrosion

Analysis record that is linked to that Thickness Measurement Location record:

- Asset Average Corrosion Rate

- Asset Average Corrosion Rate Next Inspection Date

- Asset Average Corrosion Rate Retirement Date

- Asset Average Corrosion Rate Remaining Life

These fields are populated in the following scenarios:

- The following settings are defined on the **Asset Analysis Settings** window for the TML:

  - The **Apply CCR to TML Rem Life Next Insp Date Calc** check box is selected.

  -and-

  - It is specified that the Average Corrosion Rate or Formula Corrosion Rate should be calculated.

- The following criteria are met for the Thickness Measurement Location record to which the TML Corrosion Analysis record is linked:

  - The most recent measurement was recorded as a skipped measurement (i.e., a Measurement Not Taken record had the most recent Measurement Taken Date value of all measurements for the TML).

  -and-

  - The controlling corrosion rate for the TML is less than the corrosion rate for the associated TML Group record.

Previously, in either scenario, the fields listed above were populated as expected. However, these values were not retained when you navigated away from the page on which you were entering the TM data (e.g., the **TM TMLs/Measurements** page). As a result, these values were not

considered when the following fields in the associated Asset Corrosion Analysis record were populated:

- Asset Calc Adjusted Next Insp Date

- Asset Calc Adjusted Remaining Life

- Asset Calc Adjusted Retire Date

This issue has been resolved. Now, when adjusted corrosion data is calculated for a TML, all fields are populated as expected.

When adjusted corrosion data was calculated for a TML Group record

To understand this issue, it is important to understand the circumstances under which adjusted corrosion data is calculated for a TML Group record, or when the following fields are populated in the Asset Corrosion Analysis record that is linked to that TML Group record:

- Asset Calc Adjusted Next Insp Date

- Asset Calc Adjusted Remaining Life

- Asset Calc Adjusted Retire Date

These fields are populated in the following scenarios:

- The **Apply CCR to TML Rem Life Next Insp Date Calc** check box is selected on the Asset Analysis Settings window for the Equipment record in the TM Analysis.

    -or-

- For the TML whose Thickness Measurement Location values are used to populate values in the associated TML Group record:

    o The most recent measurement was recorded as a skipped measurement (i.e., a Measurement Not Taken record had the most recent Measurement Taken Date value of all measurements for the TML).

        -and-

- o The controlling corrosion rate for that TML is less than the corrosion rate for the associated piece of equipment.

Previously, the fields listed above were populated as expected. However, the adjusted corrosion data should have also been considered for the Asset Corrosion Analysis record that was linked to the Equipment record in the TM Analysis. Instead, this adjusted corrosion data was always ignored at the Equipment level, and therefore, the following fields might not have been populated correctly in the Asset Corrosion Analysis record that was linked to the Equipment record:

- Asset Controlling Next Insp Date

- Asset Controlling Remaining Life

- Asset Controlling Retire Date

This issue has been resolved. Now, when adjusted corrosion data is calculated and that data is more conservative than the calculated data for all other TMLs in the TM Analysis, these fields are populated as expected.

Fixing records with invalid data

Because this issue could have caused your TM Analyses to contain invalid data, we recommend that you run the Bulk Analyze tool for the associated Equipment or TML Group records if you:

- Use the **Apply CCR to TML Rem Life Next Insp Date Calc** setting on the **Asset Analysis Settings** window.

  -or-

- Include Measurement Not Taken records in your TM Analyses.

(TS ID: 60861)

- Previously, when you attempted to send or receive data to or from a TM device, and the send or receive operation took longer than two minutes, an error message was displayed, and the data was not sent or received

as expected. This issue has been resolved. Now, in this case, no error message appears, and the send or receive operation is completed. (TS ID: 60305)

- The following issue occurred only for Security Users who are assigned the *Metric* Unit of Measure (UOM) Conversion Set:

  In the **TM Initial Measurement Data Entry** grid, the values in the **Measurement Values (Millimeters)** column were converted to inches instead of the expected UOM. This issue occurred in the following scenarios:

    - You entered values in any column other than the **Measurement Values (Millimeters)** before entering the measurement values. For example, this issue occurred if you entered the reading values first and then entered the measurement values second.

    - Values existed in both the **Measurement Values (Millimeters)** and at least one other column before you opened the **Corroded Area Values** dialog box to either view *or* modify existing measurement values. After you closed the **Corroded Area Values** dialog box, even if the values were previously displayed as expected, they were converted to inches at that time.

  This issue has been resolved. Now, regardless of whether there are existing values in columns other than the **Measurement Values (Millimeters)** column, you can add, view, and modify measurement values, and they will be converted and displayed using the expected unit of measure. (TS ID: 60297)

- Previously, if you were logged in as a Security User with a Meridium APM Culture setting for which a *comma* was used as a decimal delimiter in numbers, an error message appeared when you attempted to access the **Asset Analysis Plot** page, and you could not view the bar graph for the Equipment record for which you accessed the page. This issue has been resolved. Now, regardless of your Meridium APM Culture setting, no error message appears, and the **Asset Analysis Plot** page is displayed as expected. (TS ID: 60238)

- Previously, if you had Associated Pages defined for Equipment or TML Group families, when you opened a record in either family on the **TM TMLs/Measurements** page, the Associated Pages did not appear on the **Associated Pages** menu. This issue has been resolved. Now, in this case, the Associated Pages will appear as expected. (TS ID: 59834)

- Previously, when you tried to view a plot on the **TML Analysis Plot** page, an error message appeared if:

  - The date format setting associated with your Meridium APM Security User account was *dd/mm/yyyy* (e.g., 15/3/2012 for March 15, 2012).

  - The Measurement Taken Date field in an associated Thickness Measurement record contained a *dd* value that was greater than *12* (i.e., the number of months in a year).

  This happened because the Meridium APM system tried to apply the date to the plot assuming that the date format was *mm/dd/yyyy*. For example, if you specified a Measurement Taken Date value of *14/04/2012*, as in *April 14, 2012*, the Meridium APM system attempted to use the *14* as the *mm* value. This issue has been resolved. Now, when you access a plot in this case, the *dd* value will be used correctly, and no error message will appear. (TS ID: 59646)

- Previously, the following issue occurred when:

  - The Least Squares Corrosion Rate was calculated for a Thickness Measurement Location record.

    -and-

  - You were logged in as a Metric user (i.e., your Security User account was associated with a Metric UOM Conversion Set).

  The Meridium APM system used the measurement reading values that were associated with the TML as if the unit of measure (UOM) that was

associated with the measurements was *inches*. As a result, the first data point that appeared in the **TML Analysis Plot** workspace on the **TML Analysis Plot** page was being displayed using *inches* instead of *millimeters*. This caused an irregular data point to appear in the plot, similar to the one shown in the following image.

This issue has been resolved. Now, the data point in the **TML Analysis Plot** workspace will use the correct UOM when you create new readings.

After you upgrade to V3.6.0.0.0...

You may encounter this issue while working with existing TM Analyses that have *not* been modified since you upgraded. You can use the Bulk Analyze tool to update the Equipment or TML Group records associated with the existing TM Analyses where you encountered the issue. (TS ID: 59645)

• Previously, the Meridium APM system allowed you to create a Measurement Not Taken record whose Measurement Taken Date value preceded that of the first Thickness Measurement record that was associated with the TML.

Additionally, the Meridium APM system allowed you to modify the value in the Measurement Taken Date field in a Thickness Measurement record even if doing so resulted in a Measurement Not Taken record with the earliest date of any measurement associated with the TML. Instead, only active Thickness Measurement records should represent the first measurement that is associated with a TML.

These issues have been resolved. Now, if you attempt to execute either of these workflows, an error message will appear indicating that the operation is not allowed because the first measurement must be an active Thickness Measurement record. (TS ID: 55186, 59736)

- Previously, the Meridium APM system allowed you to create consecutive Measurement Not Taken records when the following criteria were met:

  - An existing Measurement Not Taken record contained the value *Inactive* in the Measurement Status Indicator field.

    -and-

  - Another Measurement Not Taken record contained the value *Active* in the Measurement Status Indicator field *and* a date in the Measurement Taken Date field that directly preceded or followed that of the inactive Measurement Not Taken record.

    -and-

  - Using the **Measurements** grid on the **TM TMLs/Measurements** page, you changed the value in the Measurement Status Indicator field in the inactive Measurement Not Taken record to *Active*.

This issue has been resolved. Now, in this scenario, if you attempt to make active an inactive Measurement Not Taken record via the **Measurements** grid on the **TM TMLs/Measurements** page, an error message will appear indicating that the operation is not allowed because it would result in consecutive Measurement Not Taken records.

Note: This issue assumes that you have *not* enabled the option to create consecutive Measurement Not Taken records (i.e., the **Allow Consecutive Skipped Measurements** check box is *cleared* on the **Global Preferences** page).

(TS ID: 55170)

- Previously, when you imported multiple readings from a device and then saved the readings *one at a time* via the **Devices** page, Thickness Measurement records were created for all associated TMLs, but the associated TM Analysis was updated only for the first reading that you saved. This issue has been resolved. Now, when you save readings one at a time via the **Devices** page, the associated TM Analysis will be updated for each reading that you save. (TS ID: 50935)

- Previously, the TML Analysis Type field in Thickness Measurement Location records was configured to contain the System Codes that were stored in the System Code Table *CITP (Corrosion Inspection Type)*. As a result, *all* baseline analysis types (i.e., UT, RT, and TML) appeared in the list in the TML Analysis Type field *and* the **TML Analysis Type** list in the **TMLs** pane on the **TM TMLs/Measurements** page. Instead the TML Analysis Type field should contain only analysis types for which Corrosion Analysis Settings records have been created for the Equipment or TML Group record to which a Thickness Measurement Location record is linked.

  This issue has been resolved. Now, the TML Analysis Type field in Thickness Measurement Location records contains a list that is populated with only analysis types for which an associated Corrosion Analysis Settings record exists. The System Code Table *CITP (Corrosion Inspection Type)* is no longer used to populate this list. (TS ID: 37044)

Inspection Management

The following issues existed in Inspection Management in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, a secured user with an Inspector role could not create an Inspection Task because he or she lacked the proper permissions. This issue has been resolved. *View* and *Insert* privileges for the Inspection role have been added to the Task Execution entity family, the Has Event

Execution relationship family, and the Has Task Execution relationship family. (TS ID: 94778)

- Previously, if you were a member of the MI Inspection Security Group and *not* a member of a Security Group for which View privileges were defined for the RBI Degradation Mechanisms and Has Degradation Mechanisms families (e.g., MI RBI Analyst), when you attempted to view an Inspection record that was linked to an Inspection Task record that was previously created from or linked to an RBI Recommendation record, an error message appeared, and you were unable to view the Inspection record. This issue has been resolved.

  In order to resolve this issue, the MI Inspection Security Group has been granted *View* privileges to the following families:

  - RBI Degradation Mechanisms entity family

  - Has Degradation Mechanisms relationship family

  (TS ID: 55842)

- Previously, if the ID Template for the Inspection Task family had been modified from the ID Template that was delivered to the baseline Meridium APM database (i.e., [MI_TASK_ID]), when you attempted to create or modify an Inspection Scope using the **Inspection Scope Builder** and selected an *existing* Inspection Task record on the **Select New or Existing Task** screen, an error message appeared when you clicked the **Finish** button on the builder, and you could not complete the process. This issue has been resolved. Now, in this case, you will be able to create or modify the Inspection Scope, as expected. (TS ID: 55579)

- Previously, when you linked a Reference Document record to an Inspection record via the **Inspection Finding Checklist** page (using either the **Documents** link or the shortcut menu in the tree), an icon indicating the association between the Inspection record and the Reference Document record (i.e.,) should have appeared next to the **Documents** link on the **Common Tasks** menu. Instead, this icon did not

appear unless you navigated away from and back to the page *or* away from and back to the node representing the Inspection record in the tree. This issue has been resolved. Now, when you link a Reference Document record to an Inspection record via the **Inspection Finding Checklist** page, the icon appears automatically next to the **Documents** link on the **Common Tasks** menu, as expected. (TS ID: 54459)

Risk Based Inspection (RBI)

The following issues existed in RBI in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, if you were logged in as a Metric user (i.e., your Security User account is associated with a Metric UOM Conversion Set) and you modified any value in a Criticality Calculator RBI Components record that is used to populate the value in the Calculated Inventory field, the Calculated Inventory field was populated with the English value (i.e., pounds) instead of the Metric value (i.e., kilograms). Additionally:

  - The Calculated Inventory field displayed the text *Kilograms* even though the value itself was in *Pounds*.

  - If the value in the Calculated Inventory field was used to populate the Inventory field in the associated Criticality Consequence Evaluation record, that Inventory field would also contain the English value instead of the Metric value.

  This issue has been resolved. However, some of your Criticality Calculator RBI Components and Criticality Consequence Evaluation records could contain invalid data due to this issue. We recommend, therefore, that you correct the data in the records that were impacted by this issue.

  How to correct existing records with invalid data.

  1. Run the following query to locate the Criticality Calculator RBI Components records that contain a value in the Calculated Inventory field:

SELECT [MI_EQUIP000].[MI_EQUIP000_EQUIP_ID_C] "Equipment ID", [MI_CCRBICOM].[MI_RBICOMPO_COMPO_C] "Component", [MI_CCRBICOM].[MI_CCRBICOM_CALC_INV_N] "Calculated Inventory"

FROM [MI_EQUIP000]

JOIN {MIR_HSRBICMP} ON [MI_EQUIP000].ENTY_KEY = {MIR_HSRBICMP}.PRED_ENTY_KEY

JOIN [MI_CCRBICOM] ON {MIR_HSRBICMP}.SUCC_ENTY_KEY = [MI_CCRBICOM].ENTY_KEY

WHERE [MI_CCRBICOM].[MI_CCRBICOM_CALC_INV_N] IS NOT NULL

2. For any record that appears in the query results, complete the following steps:

   a. Open the **RBI Asset View** page for the Equipment record that is associated with the impacted Criticality Calculator RBI Components record.

   b. In the **RBI Explorer** pane, select the Criticality Calculator RBI Components node whose Calculated Inventory field contains the incorrect value.

   c. On the Criticality Calculator RBI Components datasheet, on the **Operating and Process** tab, clear the Initial Fluid Phase field, and then enter in the field the *same value* that the field contained previously.

   d. Save your changes.

   The Calculated Inventory field is populated automatically with the correct value.

   e. If the value in the Calculated Inventory field is used to populate the Inventory field in the associated Criticality Consequence Evaluation record, you must perform one of the following tasks, depending upon the state of the RBI Analysis that is associated with the RBI Component whose Calculated Inventory value you updated:

- If the RBI Analysis is in the *Risk Completed* state, create a new RBI Analysis and a new Criticality Consequence Evaluation record.

- If the RBI Analysis is in the *Created* state, open the associated Criticality Consequence Evaluation record (via the **Consequence Evaluations** tab), and then clear and reselect the **Use Calculated Inventory** check box on the **Common** tab.

  The Inventory field is populated automatically with the correct value.

(TS ID: 60897)

- Previously, the Initial Fluid Phase field was not displayed on the Criticality RBI Component - Exchanger Tube datasheet by default. Because this field is required to populate the Calculated Inventory field *and* to calculate RBI Analyses, you would have to add it to the datasheet manually (in order to populate the field) for the Criticality RBI Component - Exchanger Tube family. This issue has been resolved. The Initial Fluid Phase field has been added to the Criticality RBI Component - Exchanger Tube datasheet in the baseline Meridium APM database. (TS ID: 60890)

- Previously, several issues existed in policies that are used to generate RBI Recommendation records. Most of these issues were nonfunctional in nature, meaning that you should not have encountered any problems with your RBI Recommendation records as a result of these issues. However, in some cases, it is possible that the wrong Inspection Strategy record was selected when the Policy record *Appendix_I* or *Appendix_G* was used to select that Inspection Strategy record. Because of this issue, certain RBI Recommendation records could contain invalid values.

  This issue has been resolved by modifying the baseline Policy records and Inspection Strategy records. The resolution, however, requires you to complete the following manual steps:

1. Regenerate any existing RBI Recommendation records that contain invalid data.

2. Import the modified Policy records.

3. Import the modified Inspection Strategy records.

How to regenerate existing records with invalid data.

1. Run the following queries to locate the RBI Recommendation records that contain invalid values due to this error:

    SELECT [MI_RBIRECOM].[MI_REC_ID] "Recommendation ID", [MI_RBIRECOM].[MI_REC_BASIS] "Recommendation Basis", [MI_MRBIANAL].[MI_CRITANAL_EQ_ID_C] "Equipment ID" FROM [MI_RBIRECOM] JOIN_PRED [MI_MRBIANAL] ON {MI Has Recommendations} WHERE ([MI_RBIRECOM].[MI_REC_BASIS] = 'LC75' OR [MI_RBIRECOM].[MI_REC_BASIS] = 'LC76' OR [MI_RBIRECOM].[MI_REC_BASIS] = 'LC761')

    -and-

    SELECT [MI_RBIRECOM].[MI_REC_ID] "Recommendation ID", [MI_RBIRECOM].[MI_REC_BASIS]"Recommendation Basis", [MI_MRBIANAL].[MI_CRITANAL_EQ_ID_C] "Equipment ID", [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] "Damage Mechanism", [MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] "Criticality Item Type" FROM [MI_RBIRECOM] JOIN_PRED [MI_MRBIANAL] ON {MI Has Recommendations} WHERE ([MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Amine Cracking (ASCC)' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Carbonate Cracking' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Caustic Cracking' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Chloride Stress Corrosion Cracking (CI SCC)' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C]

= 'Hydrogen Stress Cracking (HSC)- Hydrofluoric Acid' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Polythionic Acid SCC (PTA)' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Sulfide Stress Cracking (SSC)' OR [MI_RBIRECOM].[MI_RBIRECOM_DAMAG_MECHA_C] = 'Wet H2S (Blistering, SOHIC, HIC, SSC)') AND ([MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] NOT LIKE 'Heat Exchanger-Bundle' AND [MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] NOT LIKE 'Air Cooled Exchanger-Tbs') AND [MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] NOT LIKE 'Air Cooled Exchanger-Header'

2. For any record that appears in the query results, complete the following steps:

    a. Open the **Asset View** page for the Equipment record that is associated with an RBI Recommendation record that you want to regenerate.

    b. In the **RBI Explorer** pane, select the Equipment node whose associated RBI Recommendation record(s) you want to regenerate.

    c. On the **Recommendation Tasks** menu, click the **Generate Recommendations** link.

    The **Generate Recommendations** dialog box appears.

    d. Click **OK**.

The RBI Recommendation records are generated.

How to import the modified Policy records.

1. Using the **Import/Export Metadata** window, navigate to the following location on the Meridium APM Application Server machine: **C:\Meridium\DbUpg\MI_DB_Master_3600000\3600000_IEU_ManualImports\Policy Records**.

2. Import the following files, one at a time:

- Appendix_B

- Appendix_D

- Appendix_E

- Appendix_F

- Appendix_G

- Appendix_H

- Appendix_I

- PRD_Strategies

The files are imported, and the associated Policy records are created, replacing the previous ones.

How to import the modified Inspection Strategy records.

1. Using the **Import/Export Metadata** window, navigate to the following location on the Meridium APM Application Server machine: **C:\Meridium\DbUpg\MI_DB_Master_3600000\3600000\20 _IEU\50_Other\2_RecordsLinks**.

2. Import the file *MI_INSP_STRAT.xmI* from this location.

The file is imported, and the associated Inspection Strategy records are created, replacing the previous ones.

> **Note:** This information assumes that you have *not* previously modified your Inspection Strategy records. If you have modified your Inspection Strategy records, you should compare those with the ones that Meridium, Inc. is providing and make changes manually, as required by your organization. This may include modifying the Recommended Inspection Scope value in the Inspection Strategy record *LC76* and the Recommended Inspection Interval values in the Inspection Strategy records *LC421* and *LC42*.

(TS ID: 60194, 60244, 60193)

- Previously, when you reviewed an analysis on the **RBI - Review Analyses** page, duplicate rows were displayed for each RBI Analysis. This issue has been resolved. Now, only one row is displayed for each RBI Analysis. (TS ID: 59943)

- The Unit Clean Up Cost value in RBI Consequence records is populated automatically by an underlying rule. Previously, this value was not *converted* using the currency conversion that is associated with a Security User's culture. Instead, the exact baseline value from the underlying rule was used and the Security User's expected currency unit was displayed to the right of the value. In other words, the correct currency UOM was used, but the value itself was not being converted to match that currency. This issue has been resolved. Now, the value in the Unit Cleanup Cost is populated automatically with a value that is converted correctly into the Security User's currency. (TS ID: 59942)

- The following issue applies to customers who are using Policy records to generate RBI Recommendation records:

  Previously, there was an issue with how the Meridium APM system selected Policy records in order to generate RBI Recommendation records. As a result, instead of selecting the expected Policy record, *Appendix_H*, other Policy records were selected. The Policy record that was ultimately used was different depending upon the Degradation Mechanism value in the associated RBI Degradation Mechanisms record.

  The issue occurred when the following criteria were met:

  - The associated RBI Criticality Analysis record contained the value *Heat Exchanger-Bundle* in the Criticality Item Type field.

    -and-

  - Certain Degradation Mechanism values were used. The following table explains which Policy record was selected incorrectly when a given Degradation Mechanism value was used.

When this Degradation Mechanism value was used…	This Policy record was incorrectly used…
Any environmental cracking value (e.g., Amine Cracking (ASCC))	Appendix_G
Criticality Calculator Internal Corrosion	Appendix_B
Criticality Calculator External Corrosion	Appendix_F

This issue has been resolved. Now, the correct Policy record, *Appendix_H*, is selected in these cases.

How to fix your existing records.

Because you might have existing RBI Recommendation records whose values are invalid as a result of this issue, we recommend that you regenerate any existing RBI Recommendation records that were generated automatically for an RBI Analysis whose component type is *Heat Exchanger-Bundle*.

To do so:

1. Run the following query to locate the Equipment records and their associated RBI Criticality Analysis records that meet this criteria:

   SELECT [MI_MRBIANAL].[MI_CRITANAL_EQ_ID_C] "Equipment ID", [MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] "Criticality Item Type", [MI_MRBIANAL].[MI_AN_ANALY_ID_CHR] "Analysis ID", [MI_RBIRECOM].[MI_REC_ID] "Recommendation ID"

   FROM [MI_MRBIANAL] JOIN_SUCC [MI_RBIRECOM] ON {MI Has Recommendations}

   WHERE [MI_MRBIANAL].[MI_CRITANAL_EQ_ITEM_TYPE_C] = 'Heat Exchanger-Bundle'

2. On the **Asset View** page, open the Equipment record that is associated with the RBI Analysis whose RBI Recommendation record(s) you want to regenerate.

3. In the **RBI Explorer** pane, select the Equipment node whose associated RBI Recommendation record(s) you want to regenerate.

4. On the **Recommendation Tasks** menu, click the **Generate Recommendations** link.

    The **Generate Recommendations** dialog box appears.

5. Click **OK**.

    The RBI Recommendation records are generated.

(TS ID: 59941)

- Previously, if all of the following conditions were met, an error message appeared when you clicked the **Review Analyses** link on the **RBI Asset View** page, and you were unable to access the **RBI - Review Analyses** page:

  - More than one Equipment node appeared in the tree in the **RBI Explorer** pane.

    -and-

  - One or more Criticality Calculator RBI Components records that were linked to an Equipment record for which you accessed the page were *not* linked to an RBI Criticality Analysis record.

    -but-

  - At least one Criticality Calculator RBI Components record *was* linked to an RBI Criticality Analysis record.

  This issue has been resolved. Now, in this scenario, no error message appears, and the **RBI - Review Analyses** page is displayed, as expected. (TS ID: 59195)

- Previously, when you created an Inspection Task record from an RBI Recommendation record using the **Work Management Item Builder**, TM half-life was *not* considered for the Desired Interval field in the Inspection Task record *unless* you were a member of a Thickness Monitoring (TM) Security Group. This issue has been resolved. To resolve this issue, the following security privileges have been added to the MI RBI Analyst Security Group in the baseline Meridium APM database:

  - View privileges to the following entity families:

    - Corrosion

    - Corrosion Analysis Settings

  - View privileges to the following relationship families:

    - Has Consolidated Recommendations

    - Has Corrosion Analysis Settings

    - Has Datapoints

  - View and Insert privileges to the Has Task Revision relationship family.

  (TS ID: 58855)

- Previously, if you were a member of the MI RBI Analyst Security Group and *not* a member of a Security Group for which View, Update, Insert, and Delete privileges were defined for the Has Superseded Recommendations relationship family (e.g., MI Recommendation Management User), when you clicked the **Supersede** link on the **Recommendation Tasks** menu on the **Recommendation Management** page, an error message appeared, and you were unable to complete the supersede operation. This issue has been resolved.

  In order to resolve this issue, the MI RBI Analyst Security Group has been granted the following baseline security privileges to the Has Superseded Recommendations relationship family: *View*, *Update*, *Insert*, *Delete*. (TS ID: 58800)

- Previously, if you were a member of the MI RBI Analyst Security Group and *not* a member of a Security Group for which View privileges were defined for the Has Reference Values relationship family (e.g., MI ASM Analyst), if the **Risk Assessment Enabled** check box was *selected* on the **Administrative Tasks** page (i.e., you use a custom calculator to calculate unmitigated risk), when you clicked the ▦ button to view the **Unmitigated Risk Assessment** window, an error message appeared. This issue has been resolved.

  In order to resolve this issue, the MI RBI Analyst Security Group has been granted View privileges to the Has Reference Values relationship family. (TS ID: 57444)

- Previously, if you were a member of the MI RBI Analyst Security Group and *not* a member of a Security Group for which View privileges were defined for the Meridium Reference Tables family (e.g., MI RBI Administrator), when you attempted to calculate an RBI PRD Analysis, an error message appeared, indicating that you had insufficient privileges to perform the operation. This issue has been resolved.

  In order to resolve this issue, the MI RBI Analyst Security Group has been granted *View* privileges to the Meridium Reference Tables family. (TS ID: 57441)

- Previously, if you were a member of the MI RBI Analyst Security Group and *not* a member of the MI Inspection Security Group, when you attempted to assign inspections to a degradation mechanism using the **Define Inspections for <Degradation Mechanism>** window *or* remove the link between an Inspection record and the Criticality Degradation Mech Evaluation record to which it was assigned already, an error message appeared, indicating that you did not have the privileges to perform the operation. This issue has been resolved.

  In order to resolve this issue, the MI RBI Analyst Security Group has been granted the following baseline security privileges to the Has Inspections relationship family: *View*, *Update*, *Insert*, *Delete*. (TS ID: 57197)

- Previously, if you were a member of the MI RBI Analyst Security Group and *not* a member of a Security Group for which Update, Insert, and Delete privileges were defined for the Has Consolidated Recommendations relationship family (e.g., MI Recommendation Management User), when you clicked any of the following links, an error message appeared:

    - The **Review Recommendations** link on the **Recommendation Tasks** menu on the **RBI Asset View** page

    - The **Mass Review Recommendations** link on the **Asset Tasks** menu on the **RBI Asset View** page

    - The **Review Recommendations for Asset** link on the **Inspection Group** menu on the **Inspection Group Details** page

    This issue has been resolved. In order to resolve this issue, the MI RBI Analyst Security Group has been granted the following baseline security privileges to the Has Consolidated Recommendations relationship family: *Update*, *Insert*, *Delete*. (TS ID: 56133)

- Previously, when you attempted to create an Inspection Task record from an RBI Recommendation record (using the **Work Management Item Builder**) *or* link an RBI Recommendation record to an Inspection Task record via the **Link to Task** link on the **Asset Tasks menu** on the **Recommendation Management** page, an error message appeared, and you were unable to complete the operation. This issue has been resolved.

    In order to resolve this issue, the MI RBI Analyst Security Group has been granted the following baseline security privileges to the Has Task Revision relationship family: *View*, *Update*, *Insert*, *Delete*. (TS ID: 56133)

- Previously, when you deleted an RBI Recommendation record that was linked to an Inspection Task record, the following fields in the Inspection Task record were not updated as expected:

- Desired Interval

- Desired Interval Basis

- Task Details

Instead, the values that were mapped from the RBI Recommendation record were retained in these fields. This issue has been resolved. Now, in this case, these fields will be updated as expected. (TS ID: 55583)

- Previously, if you attempted to link to an RBI Recommendation record an Inspection Task record whose Task ID field contained more than 50 characters, an error message appeared, and you were not able to link the records. This issue occurred whether you were linking an existing Inspection Task record to the RBI Recommendation record *or* creating a new Inspection Task record from the RBI Recommendation record. This issue resulted from a limit to the number of characters that the Meridium Task ID field in the RBI Recommendation record could contain.

  This issue has been resolved. The Edit Length for the Meridium Task ID and Proposed Task ID fields has been increased from 50 to 255 characters. Now, in the scenario described above, no error message will appear, and the Inspection Task record will be linked to the RBI Recommendation record, as expected. (TS ID: 51792)

Asset Safety

Safety Instrumented System (SIS) Management

Previously, Security Users that belonged to the MI SIS Administrator or the MI SIS Engineer Security Groups could not create an inspection task for a SIL Analysis. This issue has been resolved. The MI SIS Administrator and the MI SIS Engineer Security Groups have been granted Insert privileges to the RBI Components and the Has RBI Components families. (TS ID: 60641)

Calibration Management

The following issues existed in Calibration Management in one or more previous releases and have been resolved in V3.6.0.0.0:

- Previously, Security Users that belonged to the MI Calibration Administrator Security Group could not view the Calibration Task Revision or Inspection Task Revision records. This issue has been resolved. The MI Calibration Administrator Security Group has been granted View privileges to the SAP System family. (TS ID: 61765)

- Previously, Security Users that belonged to certain Calibration Management Security Groups could not view, add, or modify reference documents. This issue has been resolved. The MI Calibration Administrator Security Group has been granted View, Insert, and Update privileges to the Reference Document family, and the MI Calibration User Security Group has been granted View privileges to the Reference Document family. (TS ID: 60723)

- Previously, Security Users that belonged to the MI Calibration Administrator Security Group could not view or create a Calibration Template Detail, Analyzer record, and Security Users that belonged to the MI Calibration User Security Group could not view a Calibration Template Detail, Analyzer record. This issue has been resolved. The MI Calibration Administrator Security Group has been granted View and Insert privileges to the Calibration Template Detail, Analyzer family, and the MI Calibration User Security Group has been granted View privileges to the Calibration Template Detail, Analyzer family. (TS ID: 60651)

- Previously, Security Users that belonged to the MI Calibration Administrator Security Group could not delete a Task record. This issue has been resolved. The MI Calibration Administrator Security Group has been granted Delete privileges to the Has Task Revision relationship family. (TS ID: 60645)

V3.6.0.1.0

Important Note About V3.6.0.1.0

The V3.6.0.0.0 database upgrade process contained a script that deleted custom State Configurations. Baseline State Configurations were not impacted by this issue.

The database upgrade process has been repaired in V3.6.0.1.0. To avoid this issue, it is imperative that you follow the installation and upgrade procedures exactly as documented in the V3.6.0.0.0 Installation, Upgrade, and System Administration documentation.

To see the issues that have been resolved in the V3.6.0.1.0 release, click here.

Resolved Issues

mobileAPM

- Previously, if you upgraded your Meridium APM Application Server to V3.6.0.0.0 from any V3.5 implementation, mobileAPM was *not* installed with the other Meridium APM components. This issue has been resolved. When you upgrade your Meridium APM Application Server to V3.6.0.1.0, mobileAPM will be installed during the upgrade process, as expected. (TS ID: 63095)

- Previously, mobileAPM did not support Internet Explorer 11. As of the V3.6.0.1.0 release, mobileAPM supports Internet Explorer 11. (WI 61332)

V3.6.0.2.0

Resolved Issues

With the release of V3.6.0.2.0, Meridium Online is available at the V3.6x level. For more information about Meridium Online, you can view the Meridium Online Release Notes. Additionally, the following specific issues have been resolved in V3.6.0.2.0.

Configuration Manager

Previously, when launching the Meridium APM Configuration Manager application from a URL, if you specified a data source, it was ignored by the Meridium APM system. Instead, the system would use the data source specified by the previous user *or* the default data source when launching the application. This issue has been resolved. (TS ID: 68458)

Dashboards

Previously, if you navigated to a dashboard, navigated away, and then navigated to a different dashboard, the first dashboard flashed on the screen before the new dashboard appeared. This issue has been resolved. (TS ID: 64788)

Meridium APM Mobile Framework

Previously, when you upgraded the Meridium APM Sync Server machine and then attempted to upgrade a handheld device where the Meridium APM Mobile Framework application was installed, the upgrade failed. As a result, if you attempted to open the Meridium APM Mobile Framework on that device, an error message appeared. You could not open the Meridium APM Mobile Framework unless you uninstalled and reinstalled that application. This issue has been resolved. Now, when you upgrade to V3.6.0.2.0, you can successfully upgrade a handheld device and open the Meridium APM Mobile Framework, as expected. (TS ID: 71557)

mobileAPM

- Previously, when using the mobileAPM application on an iOS mobile device, after you recorded a reading in a route, the number of completed readings that appears on the **Inspections** page was updated for *all* subscribed routes. This issue has been resolved. Now, the number of completed readings is updated for *only* the route for which it applies. (TS ID: 71737)

- In the baseline Meridium APM database, the MAPM Security Group has been granted the following security privileges:

    - *View* privileges to the Event Mapping family

    - *View*, *Update*, *Insert*, and *Delete* privileges to the Has Route family

  (TS ID: 68200)

- Previously, the following folders were installed on the Meridium APM Application Server machine in the virtual directory for the mobileAPM website:

    - **Utility**

    - **WindowsServices**

  Instead, these folders should *not* be accessible via the IIS Manager. This issue has been resolved. As a result, in the folder C:\Program Files\Meridium\MobileAPM:

    - The folder *Utility* has been moved to the folder C:\Program Files\Meridium\ApplicationServer.

    - The *files* in the folder *WindowsServices* have been moved to the folder C:\Program Files\Meridium\Services, and the folder *WindowsServices* itself has been deleted.

If you are upgrading to V3.6.0.2.0 from V3.6.0.1.0 and you previously modified any file in one of these folders, your changes will be overwritten when you upgrade to V3.6.0.2.0. This includes configuration files that you were required to modify in order to deploy mobileAPM for the first time. See the instructions for upgrading mobileAPM in the mobileAPM Installation, Upgrade, and System Administration documentation for information about modifying these configuration files. (TS ID: 64122)

Reports/LDAP

Previously, Meridium APM Security Users who were created via the LDAP synchronization process *and* whose user ID included the @ symbol were unable to save a report to a personal Catalog folder. Instead, when a user who met these criteria attempted to save the report, an error message appeared. This issue has been resolved. Now, in this case, no error message appears, and the report is saved as expected. (TS ID: 68191)

Risk Based Inspection (RBI)

Previously, when you generated RBI Recommendation records automatically from RBI Analyses, the logic used to select a Policy record and then an Inspection Strategy record was hard coded. As a result, you could not customize this logic, which might have been problematic for your organization. This issue has been resolved.

To resolve this issue, the baseline rules that facilitate the automatic creation of RBI Recommendation records from RBI Analyses have been removed in this release and replaced with new families, records, and queries that together define the Policy record logic that is used to generate RBI Recommendation records automatically. Specifically, the following changes have been made to the baseline Meridium APM database:

- The following entity families have been added:

    - RBI Strategy Mapping Configuration

    - RBI Strategy Mapping Details

    Additionally, a set of baseline records has been delivered for each of these families:

- RBI Strategy Mapping Configuration records store values that are used to select Policy records.

- RBI Strategy Mapping Details records store values that are used to define the Policy record logic that is used to select Inspection Strategy records.

- A new relationship family, *Has RBI Strategy Configuration*, has been added. This family relates the two new entity families, as described here:

    - The *predecessor* family is *RBI Strategy Mapping Configuration*, which has a zero to one relationship to the RBI Strategy Mapping Details family.

    - The *successor* family is *RBI Strategy Mapping Details*, which has a zero to many relationship to the RBI Strategy Mapping Configuration family.

    The new entity and relationship families are activated with the RBI license. Additionally, the MI RBI Administrator and MI RBI Analyst Security Groups have been granted *View*, *Update*, *Insert*, and *Delete* privileges to all new families.

- A new Catalog folder, *Policy Queries*, has been added to the Catalog location \\Meridium\Modules\Risk Based Inspection\Queries. This folder contains the following new queries:

    - Appendix B - Component Type filter

    - Appendix D - Component Type filter

    - Appendix E - Component Type filter

    - Appendix F - Component Type filter

    - Appendix G - Component Type filter

    - Appendix H - Component Type filter

    - Appendix I - Component Type filter

- PRD Strategies - Component Type filter

  These queries define the criticality item types for which each associated Policy record will be used to generate RBI Recommendation records.

- The following fields have been added to the family *Criticality Int. Corr. Deg. Mech. Eval.*:

  - General Corrosion

  - LocalizedOrPredictable

  - Non-Intrusive Requirement Met

- A new field, *Insulation Damage*, has been added to the family *Criticality Ext. Corr. Deg. Mech. Eval.*

  These new fields store values that are used as inputs to the associated Policy records.

  (TS ID: 64720, 65296, 67227)

Security and Accessibility

Previously, the Security Event Log query results did not include instances of automatic login. This issue has been resolved. (TS ID: 66297)

V3.6.0.3.0

Hardware and Software Changes

With V3.6.0.3.0, the 32-bit Meridium APM Server and Add-ons installer is available. You can use this installer to install the following components:

- **Meridium APM Plug-In for DataStage Client:** Installs the client components that are needed for integrating Meridium APM with DataStage.

- **Meridium APM Plug-In for DataStage Server:** Installs the server components that are needed for integrating Meridium APM with DataStage.

The 32-bit Meridium APM Server and Add-ons installer is included in the V3.6.0.3.0 distribution package. (TS ID: 80331)

Resolved Issues

The topics in this section of the Release Notes list the issues that existed in one or more previous releases and have been resolved in V3.6.0.3.0.

- **Administrative Applications**

- **Configuration Manager**

- **Meridium APM Framework**

- **APM Foundation**

- **Failure Elimination**

- **Asset Strategy**

- **Mechanical Integrity**

- **Asset Safety**

Applications

Administrative Applications

Previously, if Windows User Account Control (UAC) was enabled, in order to use the Configuration Manager or Data Source Manager application, you had to be logged in as a Windows user with an Administrator account to the machine where the application was installed. If you did not have an Administrator account, you were unable to launch these applications.

This issue has been resolved. Now, by default, you can launch the Configuration Manager and Data Source Manager applications using a non-administrative Windows account. Note that users of these applications must be granted certain Windows security permissions, regardless of the Windows account type, as documented in the Installation, Upgrade, and System Administration documentation. (TS ID: 64021)

Configuration Manager

Import/Export Metadata Tool

- Previously, when you attempted to import a Rule Library project from a Microsoft Excel file, the Rules Library did not contain the project even though the **Import/Export Results Log** dialog box indicated that the project was imported successfully. This issue has been resolved. Now, the Rule Library Project that you import from Microsoft Excel will be imported and available in the Rules Library, as expected. (TS ID: 62040)

- Previously, when you exported unformatted query results that contained numeric values to a Microsoft Excel file, the numeric values were formatted in the Excel spreadsheet as *text*, and an error indicating the mismatch (i.e., a number formatted as text) appeared in each cell where a numeric value was displayed. This issue has been resolved. Now, in this case, numeric values are formatted in the Excel spreadsheet as *numbers*, as expected. (TS ID: 62041)

Script Builder

Previously, the following issue occurred when:

- You were using an Oracle database.

- The Oracle Server version was 11.2 or later.

When you generated a script via the **Script Builder** to modify the physical tables for a family to which you made changes, that family remained in the list in the **Scriptable Items** area on the **Script Builder** even after you executed the script successfully. In other words, if you reopened the **Script Builder**, the family still appeared in this list. Instead, the list should contain only families whose physical tables and views still need to be modified. This issue has been

resolved. Now, after you run the script, the family no longer appears in the list. (TS ID: 74918)

Meridium APM Framework

Catalog

- Previously, if you were *not* a Super User but were a member of two or more Security Groups, when you attempted to search a folder in the Catalog to which more than one Security Group was granted permissions, an error message appeared. This issue has been resolved. Now, you can search any Catalog folder to which you have permissions. (TS ID: 82305)

- Previously, when you made changes to a Catalog item caption via the **Catalog Item Properties** dialog box, the caption was not updated as expected. This issue has been resolved. (TS ID: 74903)

Home Pages - Localization

Previously, if you defined a translation for the name of a Home Page, the translation was applied to the string as expected. However, if you reopened the **Localize <Strings>** dialog box, the translation that you defined no longer appeared in the **Localized Values** grid. If you clicked the **OK** *or* **Cancel** button on the dialog box and refreshed the application (e.g., closed and relaunched the Meridium APM Framework application), the translation was no longer applied to the Home Page name. This issue has been resolved. (TS ID: 74908)

APM Foundation

Configuration Tools

Previously, when you modified the ID Template for a family, the associated Record ID was not updated as expected *unless* you reset IIS after making the change. So, for example, if you searched in the Meridium APM Framework application for records belonging to a family whose ID Template you modified, the Record IDs that appeared in the search results section on the **Search** page were consistent with the *former* ID Template instead of the modified version. This issue has been resolved. Now, when you modify an ID Template, the associated Record ID is updated automatically. (TS ID: 74894)

Core Analysis

Dashboards

- Previously, the following issue existed in the **List - Query Result** section, where the associated query (as shown in the design view) met the following conditions:

  - In the *first* column, the **Display** check box was *cleared* (i.e., the field values did not appear in query results).

  - In the *second* column, a URL was defined in the **Hyperlink** cell.

  The **List - Query Result** section for this query should have displayed hyperlinks in the *first* column because the query was configured to:

  - *Not* display values for the first column.

  - Provide a hyperlink on the values in the second column.

  Instead, the values in the second column in the **List - Query Result** section were hyperlinked. Additionally, the second column contained the same values as the first column, even when the associated record contained different values in these fields.

  For example, this issue existed when the following query was used to display values in the **Overdue Measurement Locations** section (a configured **List - Query Result** section on the Operator Rounds dashboard).
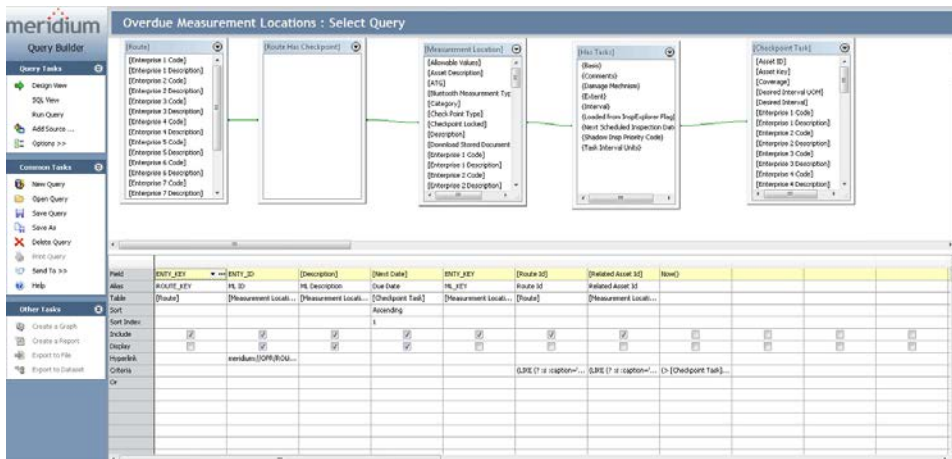
This query is configured to make the values in the **ML ID** column in the **Overdue Measurement Locations** section hyperlinked. However, the values in the **ML Description** column were hyperlinked instead, and the ML Description values mimicked the values in the first column.

This issue has been resolved. Now, the **List - Query Results** section will display hyperlinks and values as configured in the associated query. Using the same example, the **Overdue Measurement Locations** section on the Operator Rounds dashboard will look like this:

(TS ID: 64027)

- Previously, when you clicked a hyperlink on a dashboard, there was no indication that the Meridium APM system was responding to that action. This issue has been resolved. Now, when you click a hyperlink, its color will change to *red* while the Meridium APM system processes the request. (TS ID: 64026)

Graphs

- Previously, graphs that were created via a URL that included query parameters in *Russian* did not display any results when opened. This issue has been resolved. (TS ID: 81962)

- Previously, if you modified the title of a graph by right-clicking the graph on the **Graph Viewer** page and selecting the **Edit** title, the graph's title reverted to the original title the next time you opened the graph. This issue has been resolved. Now, the graph's title will be retained. (TS ID: 74901)

Queries

- Previously, if a query was configured to prompt users for information, the prompt would appear each time you clicked a navigational link (e.g., the **Next** link) while viewing the query results. This issue has been resolved. Now, the prompt will not appear when you navigate from one page to another in the query results. (TS ID: 81966)

- Previously, if a query was configured to use multiple query prompts that utilized additional queries to retrieve information from the database, in some cases, when the Meridium APM system constructed the SQL code at runtime, the query was incorrectly translated by the system. This resulted in odd behavior when you ran the query. Specifically:

  - No results appeared in the results grid, but the record count below the results grid indicated that a certain number of records were returned by the query.

-or-

- ▪ The results that appeared in the results grid did not correspond with the query that you defined.

This issue has been resolved. Now, when you create complex queries of this nature, the expected results are displayed when you run that query. (TS ID: 81961)

- • Previously, when exporting query results to a Microsoft Excel file, if the WCFHost service took longer than 10 seconds to schedule the export, an error message appeared indicating that the operation had timed out. This issue has been resolved. In addition, you can now modify the default time-out setting. To support this change, V3.6.0.3.0 includes a new configuration file, *Meridium.Excel.dll.config.* In this file, you can modify the value in the ServiceTimeout parameter to change the default time-out setting, if desired. (TS ID: 74930)

- • Previously, if you created an expression in a query that included the TO_CHAR function to display a specific number of digits based on the number of nines (9) that you included in the expression, a formatting rule replaced leading zeros in the values to which the expression was applied with null values, or spaces. As a result, where these values were displayed in the query results, some cells appeared empty because the cell was only wide enough to accommodate the leading spaces. Although the full values were present, you had to increase the width of the column containing the values in order to view all digits.

  For example, suppose that you created the following expression and applied it to a query:

  TO_CHAR([Failure].[Total Failure Cost], **'999,999,999,999**.00')

  In this case, you would want to see the Total Failure Cost values in Failure records and convert the returned values to values containing 12 digits (not including the post-decimal digits). When the query results included a value with fewer digits than specified

in the TO_CHAR function, the leading zeros in that value were replaced with spaces. So, for example, if the Total Failure Cost field in a Failure record contained the value *12345.22*, the converted result would be *0000000012345.22*, where each *0* would be replaced with a space.

Then, if the column containing this result was wide enough to accommodate only six digits, only spaces would appear in the cell for this value because the first six digits in the converted value (i.e., 0000000012345.22) were replaced with spaces.

This issue has been resolved. Now, in this case, converted values are trimmed of leading spaces where they appear in query results. (TS ID: 74929)

- Previously, when exporting query results that met the following criteria to a Microsoft Excel file, an error message appeared:

  - The query included fields whose data type was something other than *Character*.

  - The query results included null values in one or more of these fields.

  This issue has been resolved. Now, no error message appears, and the query results are exported successfully. (TS ID: 74927)

- The following issue existed *only* when the following criteria were met:

  - Two users in your organization logged in to Meridium APM using the *same* Citrix connection.

  - While logged in to the Meridium APM application, both users exported query results to Microsoft Excel, and the user who exported the results *second* was not an administrative user on the Citrix machine.

Previously, in this scenario, the query results were exported as expected for the user who exported to Microsoft Excel *first*. When the second user (or any subsequent user who met these requirements) attempted to export query results, however, an error message appeared. This issue has been resolved. Now, no error message will appear, and the query results will be exported as expected. (TS ID: 64023)

Reports/LDAP

Previously, Meridium APM Security Users who were created via the LDAP synchronization process were unable to save a report to a personal Catalog folder when the following criteria were met:

- The Security User's user ID included the @ symbol.

    -and-

- The report that the Security User was attempting the save included a subreport.

Instead, when a user who met these criteria attempted to save the report, an error message appeared. This issue has been resolved. Now, in this case, no error message appears, and the report is saved as expected. (TS ID: 73929)

Task Management

Previously, the following issue occurred when you:

- Used the baseline Available Tasks query.

    -and-

- Did *not* have View privileges to the RCM FMEA Asset family.

    Note: Previously, no baseline privileges to this family were granted to Task Management Security Groups.

When you accessed the **Task List** page, the Available Tasks query results appeared in the grid in the **Task Management** workspace, as expected. If you reran the Available Tasks query, however, no results appeared in

the grid, even when the record count below the results grid indicated that Task records were returned by the query. As a result, you could not narrow your search by specifying values in the *Asset ID* or *Task Family* query prompts that appear by default on the **Task List** page.

This issue has been resolved. In the Meridium APM baseline database, the following Security Groups have been granted View privileges to the RCM FMEA Asset family:

- MI Task Manager Administrator

- MI Task Manager User

Now, when you rerun the Available Tasks query, the expected results appear in the results grid. (TS ID: 76440)

Data Management

Bulk Data Form

Previously, when you opened records in the Bulk Data Form via a URL, column widths did not adjust automatically to the longest value in the column. Instead, you had to manually apply the Best Fit option from the shortcut menu when the length of values in a column exceeded the column width. This issue has been resolved. In order to resolve this issue, a new parameter for the Bulk Data Form URL, *BestFitColumns*, has been added to the baseline database. You can add this parameter, with the value *true*, to any URL that you use to open records in the Bulk Data Form. When you do so, the Best Fit option will be applied automatically to columns in that Bulk Data Form. (TS ID: 74922)

Conditional Alerts

Previously, when you created a Conditional Alerts record with an interval of *Monthly*, *Quarterly*, or *Annually*, the first alert was sent based on the date that you specified. However, each alert thereafter was sent using a calculation that used the *month* only (for monthly or quarterly alerts) or *year* only (for annual alerts) when determining the date on which to send the next alert. In other words, as soon as the month *or* year value changed, a subsequent alert was sent. As a result, alerts might have been sent earlier than expected.

For example, suppose you created a Conditional Alerts record with an interval of *Annually* and specified the date *December 31, 2013* for the first alert. In this case, you would expect the second alert to send on *December 31, 2014.* The calculation, however, would use only the year value in determining when to send the second alert. That alert, therefore, would be sent when the year value changed (i.e., January 1, 2014).

This issue has been resolved. Now, the calculation uses the exact date in determining when to send subsequent alerts. (TS ID: 74899)

Searches

Previously, if you performed a search where your criteria returned *more than* one million records, the total number of records shown at the bottom of the search results section was inaccurate. This issue resulted from the total page count overlapping the total record count, distorting the record count. For example, if your search criteria returned a total of 1,348,593 records, only the digits *348,593* appeared for the record total, as shown in the following image.
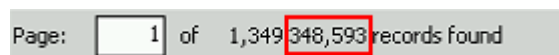
This issue has been resolved. Now, when your search results contain more than one million records, the total record count appears at the bottom of the search results section, as expected. (TS ID:72912)

Meridium APM Web Framework

Previously, when using the Meridium APM Web Framework, if you opened a query from the Catalog, changed the page size or navigated to a subsequent page in the query results, navigated away from the **Query** page, and then returned to the same **Query** page, the settings that you defined were not retained. This issue has been resolved. Now, your page size and page number will be retained when you navigate back to the **Query** page. (TS ID: 62038)

mobileAPM

Previously, if your user name contained a period (e.g., Joe.Demo), the mobileAPM feature interpreted the text that followed the period as a file extension when the user name was used as a URL parameter. This resulted in

odd behavior when you accessed the **Overview** tab for a Functional Location record. Specifically, a message that indicated the content was loading appeared on the page but did not close. Instead, the message remained active, and you were unable to navigate away from the tab. This issue has been resolved. Now, in this case, the message closes, and the content loads as expected. (TS ID: 64059)

Online Analytic Interfaces - Process Data Integration (PDI)

PDI now supports Honeywell's Uniformance® Process History Database (PHD) Version 310.1.0. (TS ID: 66592)

Operator Rounds (OPR)

- As of this release, Bluetooth technology is no longer supported for transferring temperature readings from a device to Meridium APM. You cannot, therefore, install the Bluetooth add-on or access the **Bluetooth Settings** screen on devices where the Meridium APM Mobile Framework is installed. Additionally:

  - The field *Bluetooth Measurement Type* in the Measurement Location and Measurement Location Template families is no longer used by the Operator Rounds module. The field will, however, continue to exist in the Meridium APM baseline database and appear on the baseline datasheets that are configured for these families.

  - The System Code Table *MI_OPR_BT_MEAS_TYPE* is no longer used by the Operator Rounds module. The System Code Table will, however, continue to exist in the Meridium APM baseline database.

  (TS ID: 77072)

- Previously, if you were using a SQL Server database, on the **Readings** tab on the ML Task View datasheet for numeric Measurement Location records, the values in the **Reading Value** column in the grid were rounded to the nearest whole digit. For example, if the exact reading value (i.e., the value in the Reading Value Numeric field in the corresponding Reading record) was *1.5*, the grid displayed the value *2*.

This issue has been resolved. Now, the grid will display the value that is stored in the corresponding Reading record. For example, if the value in the Reading Value Numeric field in the corresponding Reading record is *1.5*, the grid will display the value *1.5*.

To support this fix, the query that returns the list of Reading records that appear on the **Readings** tab has been modified. Specifically, in the Catalog location \\Public\Meridium\Modules\Operator Rounds\Queries\ML Administration Queries:

- The *Readings* query has been modified. This query now works with SQL Server databases only.

- The *Readings - Oracle* query has been added. This query works with Oracle databases only.

Depending on your current configuration, when you upgrade your database to V3.6.0.3.0, you may need to complete additional steps to take advantage of this fix. Specifically:

- If you are using an *Oracle* database, you will need to configure the product to use the Oracle version of the query (i.e., Readings - Oracle) as described in the Meridium APM Help.

- If you are using a *SQL Server* database and have previously customized the Readings query, the Readings query will be updated in the Baseline Catalog folder only, and you must manually update the Readings query in your Public folder.

- If you are using a *SQL Server* database and have *not* previously customized the Readings query, no additional configuration steps are necessary. The Readings query will be updated in both the Baseline and Public Catalog folders automatically.

(TS ID: 62044)

Policy Manager

Previously, if you defined and saved values in the **If Input** = text box for a Case node and later saved additional values in another **If Input** = text box for that Case node, the values that you defined in the first **If Input** = text box were not retained when you closed the Meridium APM Framework application. In other

words, the next time that you opened the Meridium APM Framework application and viewed the Policy, the values that you defined in the first **If Input** = text box did not appear. This issue has been resolved. (TS ID: 83547)

Recommendation Management

Previously, if the State Configuration assignee was changed for a Recommendation record, on the **Recommendation Management** page, the query results including that Recommendation record were not updated automatically to reflect the new assignee. For example, suppose that User_1 was assigned to the Proposed state for the Recommendation record. If User_1 assigned User_2 to the Proposed state, the value User_1 still appeared in the **Assigned To** cell for that Recommendation record in the grid on the **Recommendation Management** page. This issue has been resolved. (TS ID: 66668)

Record Manager

- Previously, the **History** link was enabled on the right-click menu only for the first field on a datasheet (when revision history was enabled for that field in the Configuration Manager). The **History** link was disabled for all other fields on the datasheet, regardless of whether or not revision history was enabled. Instead, this link should be enabled for all fields for which revision history is enabled. This issue has been resolved. (TS ID: 74920)

- Previously, when viewing a record with one or more required fields that were *cleared*, if you clicked the **Build New** link on the toolbar and then clicked the **Yes** button on the **Save Changes** dialog box, an error message appeared, as expected, displaying the required fields. However, if you clicked **OK** on the error message, the **New Query** dialog box was displayed although the required fields remained clear. This issue has been resolved. Now, when you click **OK** on the error message, the record returns to focus, and you must supply the required values or discard your changes before opening the **New Query** dialog box. (TS ID: 74905)

- Previously, when a family participated in a relationship with itself, that relationship would appear multiple times in the **Select Link Family** dialog box. This would occur if you right-clicked the family in the **Record Explorer** pane and then clicked *Create a new [Family record] to link to [root record]*.

  For example, if the root record belonged to the Equipment family and you right-clicked *Equipment* to create a new linked record, you would see the *Equipment Has Equipment* option listed more than once in the **Select Link Family** dialog box.

  This issue has been resolved. Now, the family appears only once in the **Select Link Family** dialog box. (TS ID: 74896)

Reference Documents

Previously, when creating Reference Document records, the **Document Path** text box on the **Reference Document Path** dialog box was read-only, so you could not type or paste text into it. Instead, you were required to browse to the file. This issue prevented you from being able to use URLs (e.g., http://www.google.com) as reference documents. This issue has been resolved. Now, the **Document Path** text box is enabled so that you can type or paste text into it. As a result, you can type or paste URLs (along with file paths). (TS ID: 66594)

Failure Elimination

Generation Management (GM)

Previously, in sequential Primary Capacity Incident record pairs, the event type (i.e., the value in the Capacity Event Type field) *DP* was an allowable event type in *subsequent* Primary Capacity Incident records where the *preceding* Primary Capacity Incident record contained one of the following event types:

- ME

- PE

In order to comply with North American Electric Reliability Corporation (NERC) standards, however, the event type *PD* should have been allowed instead. This issue has been resolved. Now, where a preceding Primary Capacity Incident

record contains the event type *ME* or *PE*, creating a subsequent Primary Capacity Incident record:

- With the event type PD *is* allowed.

- With the event type DP is *not* allowed (i.e., a warning message is displayed when you save the record).

(TS ID: 74924)

Metrics and Scorecards

The dial on the **View KPI** page has been redesigned in this release. Previously, the dial looked like this:
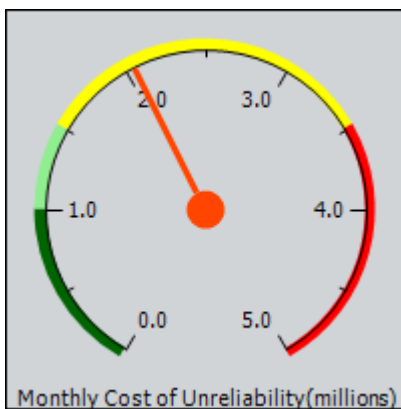
As of V3.6.0.3.0, the dial looks like this:

(TS ID: 77068)
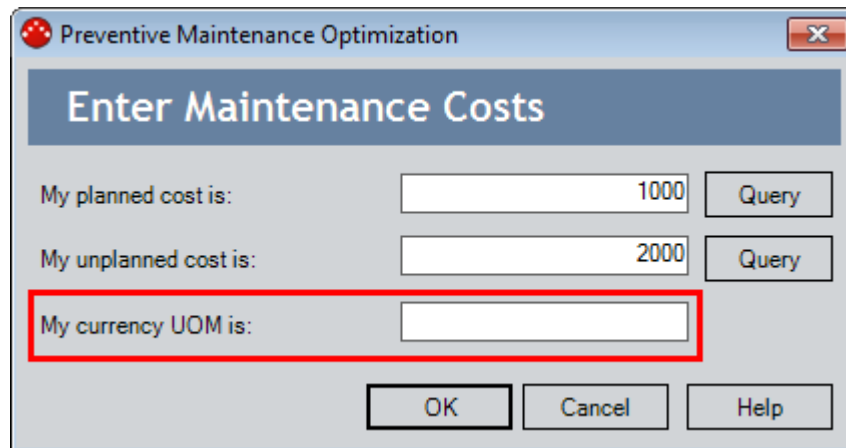
Production Loss Accounting (PLA)

Previously, in a Production Profile record, if you populated the Product field with a value that matched the Record ID of a Representative Fluid record and then attempted to save the Production Profile record, an error message appeared indicating that the record could not be saved. This issue has been resolved. Now, when you save the Production Profile record, no error message appears, and the record is saved as expected. (TS ID: 74913)

Reliability Analytics

- Previously, if a Reliability Growth Analysis included *grouped data* where two or more datapoints had the same failure date, when you recalculated the analysis, an error message appeared, indicating that beta and lambda values could not be calculated for the analysis. This issue has been resolved. Now, no error message appears, and the analysis is recalculated, as expected. (TS ID: 81963)

- Previously, when a message appeared in the **Time To Failure Distribution** section indicating that an error had occurred in the calculation of the analysis, the last line in that message was displayed in the language associated with the previous user's Meridium APM Culture setting, and you had to update the analysis in order to see the message in the language associated with your Meridium APM Culture setting. This issue has been resolved. Now, the message will be displayed in the language that is associated with your Meridium APM Culture setting. (TS ID: 66664)

- Previously, if you created a URL for the **New Analysis Builder** using parameters that specified an Equipment or Functional Location record to which to link the new RCA Analysis record, the **New Analysis Builder** would appear as expected when you clicked the hyperlink, but the RCA Analysis record that you created using this builder would not be linked automatically to the Equipment or Functional Location record that you specified in the parameters. This issue has been resolved. Now, the Equipment or Functional Location record that you specify in the parameters for the **New Analysis Builder** URL will be linked automatically to an RCA Analysis record that you create using this builder. (TS ID: 62042)

- Previously, Reliability Distribution Analyses assumed a hard-coded unit of measure (UOM) of *dollars* ($), and you could not specify your own UOM. This issue has been resolved. Now, you can specify a UOM on the **Preventive Maintenance Optimization** dialog box using the new text box *My currency UOM is.* This text box is outlined in red in the following image.

The specified UOM will be displayed in the **Preventative Maintenance Parameters** section and on the y-axis of the Optimal PM graph, as shown in the following image.
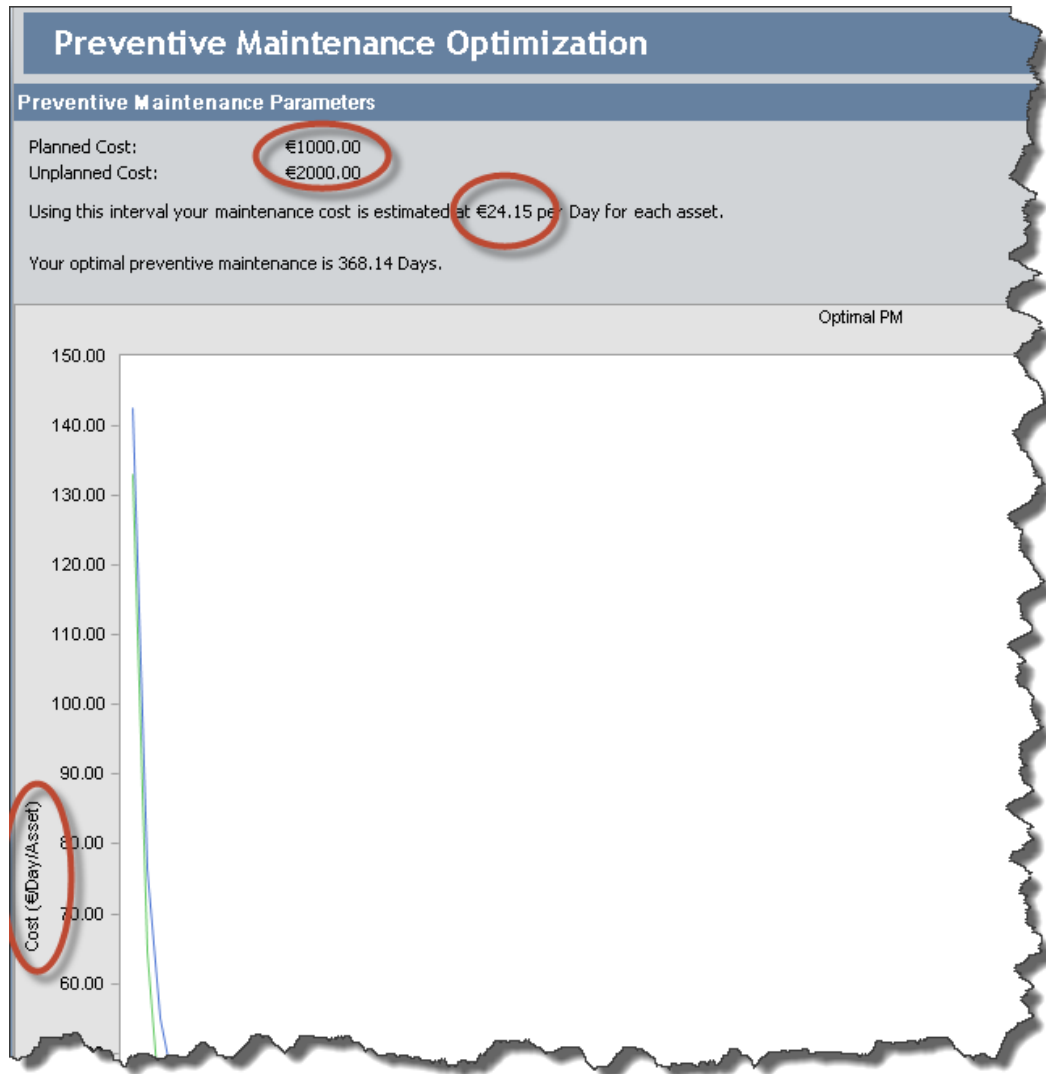
To support this change, a new field, *Currency UOM*, has been added to the Reliability Distribution family. This field stores the UOM that you specify in the **Preventive Maintenance Optimization** dialog box. After you upgrade to V3.6.0.3.0, you will need to populate this field in all existing Reliability Distribution Analyses. You can do so by accessing the **Preventive Maintenance Optimization** dialog box for each existing analysis, or you can create an Update query to perform the update across all existing analyses. You might also want to create a default rule on the Currency UOM field so that future Reliability Distribution Analyses will contain the appropriate default UOM. (TS ID: 61036)

Asset Strategy

Asset Strategy Management (ASM)

- Previously, when you created an Asset Strategy Template record from an existing Asset Strategy record, the following values were *not* copied from the source Asset Strategy record to the new Asset Strategy Template record:

  - Strategy Re-Evaluation Date

  - Strategy Notes

  You might have expected these values to be copied because the other fields in the new Asset Strategy Template record were populated automatically with values from the source record. This issue has been resolved. Now, when you create an Asset Strategy Template record from an existing Asset Strategy record, these values are used to populate the following fields in the Asset Strategy Template record:

  - **Template Evaluation Date**: Populated automatically with the value in the Strategy Re-Evaluation Date field in the source Asset Strategy record.

  - **Template Notes**: Populated automatically with the value in the Strategy Notes field in the source Asset Strategy record.

  (TS ID: 62032)

- Previously, if you designated any field in the Risk family as required, when you created a Risk in ASM, even if you did not provide a value in the required field, you could proceed past the Risk datasheet in the **Create Risk Wizard**. After you entered risk values and tried to close the **Create Risk Wizard**, though, an error message appeared. This issue has been resolved. Now, if you designate a field in the Risk family as required, if you do not provide a value in the required field, you cannot proceed past the Risk datasheet in the **Create Risk Wizard**. (TS ID: 60720)

RCM and FMEA

Previously, if the Author field in an RCM FMEA Template record contained the name of a Security User whose account was inactive in the Configuration Manager and you attempted to create a new RCM Analysis from that RCM FMEA Template record, an error message appeared. This issue has been resolved. Now, you can create an RCM Analysis from an RCM FMEA Template record regardless of whether or not the user who created the RCM FMEA Template record is active in the system. (TS ID: 81953)

Mechanical Integrity

Dashboard Queries

Previously, the query *RiskMatrix* (located in the Catalog folder \\Public\Meridium\Modules\Mecanical Integrity\Queries\Dashboard Queries) had the following issues:

- It was configured to display all Equipment records that were linked to an RBI Criticality Analysis record whose Risk Category field contained a value. Instead, only records whose associated RBI Criticality Analysis record was in the *Risk Completed* state should have appeared in the query results.

- It contained the field Combined Prob Insp Priority. Instead, the field *Inspection Priority-Rolled Up* contains the Inspection Priority that is associated with a piece of equipment and should have, therefore, been used by the query.

- It did *not* indicate which RBI Component was associated with the RBI Analysis.

These issues have been resolved. In order to resolve these issues, the RiskMatrix query has been modified in the following ways:

- A filter is applied, by default, to exclude Equipment records whose associated RBI Analysis is in a state *other than* Risk Completed.

- The field *Combined Prob Insp Priority* has been deleted from the query.

- The field *Inspection Priority-Rolled Up* has been added to the query.

- The field *Component* has been added to the query. This field contains the Criticality Calculator RBI Components record to which the RBI Criticality Analysis record is linked.

(TS ID: 74915)

Inspection Management

Previously, on the **Inspection Finding Checklist** page, the following text box labels displayed the unit of measure (UOM) *Pounds/Sq Inch Gage* always:

- **As Found Pop Pressure**

- **As Left Pop Pressure**

- **Design Set Pressure**

Instead, these labels should have displayed the UOM for the associated UOM Conversion Set, when applicable. This was problematic for Metric users, because values in these text boxes were converted using the UOM *BAR(G)* by default, but the labels did not indicate that. This issue has been resolved. Now, the labels display the appropriate UOM. (TS ID: 74917)

Risk Based Inspection (RBI)

- Previously, the Probability Of Failure calculation included a flaw in RBI Analyses that contained the Criticality Degradation Mech Evaluation record *Chloride Stress Corrosion Cracking (Cl SCC)*. As a result, when you calculated this type of RBI Analysis, the Probability Of Failure field in the associated RBI Degradation Mechanisms record was populated with a value that was *greater than* the value that should have been returned by this calculation. This issue has been resolved. The Probability Of Failure calculation has been repaired, and the Probability Of Failure field is now populated correctly in RBI Degradation Mechanisms records that are associated with the Criticality Degradation Mech Evaluation record *Chloride Stress Corrosion Cracking (Cl SCC)*. (TS ID: 78054)

- Previously, two records in the CorrosionFactors family contained data that was invalid with respect to API RP 581 standards. To correct this

issue, after upgrading to V3.6.0.3.0, you must modify your existing incorrect CorrosionFactors records.

Specifically, you must modify the CorrosionFactors records that contain the values that are shown in the following table.

FractionalWallLoss_LB	FractionalWallLoss_UB	NumOfInspections	InspectionConfidence	
0.25	0.3	4	High	
0.45	0.5	2	High	

In these records, change the value in the Value field as follows:

- Change the value *20* to *2.*

- Change the value *1160* to *160*.

You can make these changes using the Record Manager.

(TS ID: 73866)

Thickness Monitoring (TM)

- Previously, if you attempted to calculate t-min for a Thickness Measurement Location record whose Vessel Type field contained the value *Pipe Nozzle* and Outside Diameter field did *not* contain a value, an error message appeared indicating that the Outside Diameter value was invalid. This occurred because the Outside Diameter field is *required* when you calculate t-min for TMLs with the Vessel Type *Pipe Nozzle*. It was problematic, however, because you were able to specify the value *Inside* in the PV Formula field. You might have, therefore, specified a value in the *Inside Diameter* field instead of the *Outside Diameter* field. When you did, the error message appeared, which might have caused confusion.

  This issue has been resolved. Now, when you specify the Vessel Type value *Pipe Nozzle*, the PV Formula field is populated automatically with the value *Outside* and disabled, and the Inside Diameter field is disabled automatically. (TS ID: 81690)

- Previously, if you created a Thickness Measurement record that met the following criteria, when you viewed the **TML Analysis Plot** page for the associated TML, the Thickness Measurement record did not appear on the graph:

    - The date in the Measurement Taken Date field was between the Measurement Taken Date values in two existing Thickness Measurement records for the TML.

    - The value in the Measurement Value field was *greater than* those values in the two adjacent Thickness Measurement records.

  This issue has been resolved. Now, all Thickness Measurement records for the TML will appear on the graph. (TS ID: 74891)

- Previously, if you configured an Associated Page to link to the **TM TMLs/Measurements** page, when you clicked the link, an error message appeared. This issue has been resolved. Now, in this case, the **TM TMLs/Measurements** page will be displayed, as expected. (TS ID: 66670)

- Previously, on the **TM TMLs/Measurements** page, when you opened the Thickness Measurement Location datasheet for any TML that appeared in the **TMLs** grid, modified the value in any field, and then closed the datasheet, the **TMLs** grid was refreshed, and the first row in the grid was selected automatically, regardless of which row was selected previously. This issue has been resolved. Now, the grid will be refreshed, as expected, but the selected row will remain selected when you close the Thickness Measurement Location datasheet. (TS ID: 62037)

- Previously, for corroded area measurements displayed in the **Measurements** grid, the **Corroded Area Values** grid appeared when you clicked the *Measurement Value (Inches)* cell. Instead, the **Corroded Area Values** grid should have appeared when you clicked the *Readings* cell for a corroded area measurement. This issue has been resolved. Now, the **Corroded Area Values** grid appears when you click the

Readings cell for any corroded area measurement and does *not* appear when you click the **Measurement Value (Inches)** cell. (TS ID: 62036)

Asset Safety

Calibration Management

Previously, when creating a discrete calibration, the value in the AF Pass/Fail field in the associated Calibration Result, Discrete record was set to *Pass*, but should not have been, when the following criteria were met:

- The difference between the values in the following fields was within the range established by the values in the fields *Minimum Dead Band* and *Maximum Dead Band* in the Calibration Template, Discrete record:

  - *SW 1 Setpoint* in the Calibration Template, Discrete record

  - *As Found Reset Point* in the Calibration Result, Discrete record

  -and-

- In the Calibration Template, Discrete record, when the Activate Switch 1 value was set to:

  - *Decrease*, the value in the field *As Found Reset Point* was *less than* the value in the field *As Found Trip Point*.

    -or-

  - *Increase*, the value in the field *As Found Reset Point* was *more than* the value in the field *As Found Trip Point*.

For example, suppose that a Calibration Template, Discrete record contained the values in the following table.

Minimum Dead Band	Maximum Dead Band	SW 1 Setpoint	Activate Switch 1
0.25	2.5	25	Increase

Additionally, the associated Calibration Result, Discrete record was populated with the following values when data was imported using a Fluke device.

As Found Trip Point	As Found Reset Point
24.5	25.5

Notice that the difference between the values *SW 1 Setpoint* and *As Found Reset Point* is *0.5*, and therefore, within the range established by the Minimum Dead Band and Maximum Dead Band values (i.e., 0.25 to 2.5). In this case, although the As Found Reset Point value *is greater than* the As Found Trip Point value, the value in the AF Pass/Fail field would be set to *Pass*. However, because the Activate Switch 1 value was set to *Increase*, when the value in the As Found Reset Point field exceeded the value in the As Found Trip Point field, the value in the AF Pass/Fail field should have been set to *Fail*.

This issue has been resolved. Now, the value in the AF Pass/Fail field is set to *Fail*, when appropriate. (TS ID: 74926)

SIS Management

Previously, when working with an SIL Analysis that you copied from an existing SIL Analysis, if you attempted to copy an Instrumented Function record belonging to the SIL Analysis (i.e., you clicked the **Copy Function** button below the **Instrumented Functions** grid), an error message appeared, and you were unable to copy the Instrumented Function record. This issue has been resolved. Now, when you click the **Copy Function** button, no error message appears, and a new Instrumented Function datasheet appears, as expected.

This resolution does not apply to existing records. Therefore, if your database contains existing SIL Analyses that were copied from other SIL Analyses, and you attempt to copy an Instrumented Function record in the manner described here, an error message will appear. For more information about fixing existing SIL Analyses that meet this criteria, contact Meridium, Inc. and refer to *KBA 484*. (TS ID: 64031)

V3.6.0.4.0

Resolved Issues

The topics in this section of the Release Notes list the issues that existed in one or more previous releases and have been resolved in V3.6.0.4.0.

- APM Foundation

- Asset Safety

- Asset Strategy

- Configuration Manager

- Documentation

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

- Meridium APM Framework

IMPORTANT: The documentation for applying V3.6.0.4.0 that is included in the distribution package (i.e., that will be accessible via the Meridium APM Framework after you upgrade to V3.6.0.4.0) is incorrect. Please use the documentation available on the Meridium APM documentation website when you apply V3.6.0.4.0.

Applications

Configuration Manager

Previously, in Configuration Manager, after you viewed or modified the properties for a Security User, the Application Users window displayed the *top* of the list of Security Users when it returned to focus. Now, after you view or

modify the properties for a Security User, the Application Users window will display the portion of the list you were viewing before opening the properties. (TS ID: 94480)

Meridium APM Framework

Dashboards

Previously, when you opened a dashboard and applied filters using a Content Filter section, the page controls in affected list sections with multiple pages of results behaved inconsistently, with varying results. This issue has been resolved. Now, page controls in filtered list sections perform as expected for all users. (TS ID: 87596)

Datasheets

In V3.5.1, if you modified the User Help Text for fields on datasheets, the text did not appear as tooltips. This issue has been resolved. Now, when you add or modify User Help Text for fields via the Configuration Manager, the text will appear as tooltips, as expected. (TS ID 88084)

Home Page

Previously, for certain users, on the Home Page, when you clicked the **Group Pages** link on the **Home Page Tasks** menu, the submenu of active Security Groups to which you belong did not appear. This issue has been resolved. (TS ID: 88095)

Search

In versions after V3.5.1, when you used a Simple Search to return records in one family linked to records in another family, the results could take a long time to appear. Performance in this area has been improved. (TS ID: 89742)

APM Foundation

Asset Criticality Analysis (ACA)

Previously, for users with certain Culture settings, when you created or modified a new analysis, if you customized the layout of the datasheet, your customizations were not saved. This issue has been resolved. (TS ID: 88493)

Asset Health Manger

- Previously, when readings were uploaded from mobileAPM, the values in associated Health Indicator records were not always updated. This issue has been resolved. (TS ID: 89753)

- Previously, if you had a large number of Health Indicator Mapping records configured to individual asset families, when viewing an Equipment record in Record Manager, an error occurred when you clicked the **Asset Health Indicator** link on the **Associated Pages** menu. This issue has been resolved. (TS ID: 88093)

  Note: This issues affects Oracle databases only.

- Previously, on the **Asset Health Manager** page, on the **Trend** tab, the graph did not always appear when you selected a Health Indicator whose primary source record is an Xi Tag record. This issue has been resolved. The graph now appears as expected. (TS ID: 88082)

mobileAPM

1. Previously, when using mobileAPM, both active and inactive routes were downloaded to mobile devices. This issue has been resolved. Now, only active routes are downloaded. (TS ID: 96089)

- Previously, after installing mobileAPM on iOS 7 for the first time, you were prompted twice in a row to allow Location Services. This issue has been resolved. Now, in iOS 7 and iOS 8, you are prompted only once. (TS ID: 93133, 88697)

- Previously, if you generated a recommendation while the device was offline, the recommendation was not uploaded when the device was brought back online. This issue has been resolved. Now, when you bring the device back online, all recommendations will be uploaded automatically. (TS ID: 92585)

- Previously, when readings were recorded while offline and you brought the device back online, if you were viewing the list of readings as they were being uploaded to the server, the list was not refreshed when the operation was complete. This issue has been resolved.

  Now, if you are viewing a list of readings as they are being uploaded to the server, after the operation is complete the list will be refreshed automatically. (TS ID: 90788)

- Previously, when you added a comment to a reading, the comment was not visible when later viewing the reading. This issue has been resolved. Now, when you view a reading, any associated comments will be visible. (TS ID: 88857)

- mobileAPM is now compatible with iOS 8. (TS ID: 88845)

- Previously, when executing checkpoints in a Route, if a reading was entered that should have triggered a conditional checkpoint, the checkpoint was not added to the Route. This issue has been resolved. The checkpoint will now appear in the Route as expected. (TS ID: 86881)

Operator Rounds

Operator Rounds now supports eCom LF RFID functionality on an *i.roc Ci70-Ex* hand held device.

When you upgrade to V3.6.0.4.0, you must complete the device-specific first-time deployment steps for each new device that you want to use, and then restart the device(s). (TS ID: 88072)

Policy Manager

Previously, if a policy instance was inactive, any active instances following the inactive instance were not executed. For example, if the first instance listed on the **Instances** tab was inactive, no other instances were executed. Similarly, if the first two instances were active, but the third instance was inactive, the first two instances were executed but any active instances after the third instance were not executed. This issue has been resolved. Now, all active instances will be executed regardless of which other instances are inactive. (TS ID: 88078)

Record Manager

Previously, in Record Manager, you could not modify the default value in the **Document Path** text box in the **Reference Documents** window. Now, the **Document Path** text box will reflect changes to the MIRD_DOC_PATH_CHR rule. (TS ID: 88073)

Asset Safety

Calibration Management

Previously, if you used a family other than the Equipment family to create an Analog Calibration Template, an error occurred when you imported calibration data from a Meriam or Beamex device to Meridium. This issue has been resolved. (TS ID: 96052)

Asset Strategy

Asset Strategy

- Previously, when you applied a template to an Asset Strategy, the Action Basis and Risk Basis fields were not copied to the current Asset Strategy. This issue has been resolved. (TS ID: 88094)

- Previously, when packaging an action to map it to an operation in an ASI implementation package, the action description was not mapped to the long text field. This issue has been resolved. (TS ID: 88076)

Documentation

Previously, in the RBI documentation, in the "Fields Required to Calculate RBI PRD Analyses" topic, the list of required fields was inaccurate. This issue has been resolved. (TS ID: 95669)

Failure Elimination

PLA

Previously, when recording an event in a Production Event record, a transaction timeout error sometimes occurred when you entered a value in the Production Event Code field and saved the record. Performance in this area has been improved so that the error will no longer occur. (TS ID: 88075)

Installation, Upgrade, and System Administration

Starting in V3.6.0.4.0, when you apply a maintenance release to a given Meridium APM Server of the same main version (i.e., apply V3.6.0.x.x to V3.6.0.x.x), your customized pre-upgrade configuration files will be unchanged.

During the upgrade process, the Meridium APM Server and Add-ons installer adds all new baseline configuration files with the extension **.merbak** appended to file name. This means that:

- If Meridium, Inc. has made changes to a baseline file between your current version and the maintenance release that you are applying, you must reconcile the differences in these files.

   -or-

- If Meridium, Inc. has not made changes to a baseline file, no additional steps are required.

For a list of the updated baseline files that you must merge with your existing, customized configuration files, refer to the section in the Meridium APM Help system for applying V3.6.0.4.0.

(TS ID: 94377)

Mechanical Integrity

Inspection Management

Previously, when you locked an inspection, the **Sequence Number** and **Inspection Method** fields were not disabled on the **Inspection Findings** page. This issue has been resolved. Now, when an inspection is locked, all fields that cannot be edited are properly disabled. (TS ID: 84695)

NR13

- NR13 is a Brazilian regulatory standard issued by the Department of Labor, applicable only to sites in Brazil. Its general purpose is to ensure

safety in all aspects of designing, installing, operating, and maintaining certain types of equipment.

The NR13 module expands Meridium APM's baseline function to support the collecting and storing of technical data that is required to create NR13-compliant inspection reports. The module also adds two new inspection reports specifically for NR13 inspections.

The NR13 module is enabled by the *NR13* license.

You can download the NR13 help documentation here (PDF).

(TS ID: 91275)

- To ensure photographs are included in your NR13 reports, when attached as reference documents, they *must* be stored in the database. To do so, when attaching a photograph as a reference document:

    - In the Reference Document window, click the **Store Document?** check box.

Store Document?	☑

(TS ID: 91275)

Risk Based Inspection (RBI)

Previously, if you implemented a custom rule for mapping the ASM module to the RBI module, the custom rule code in these projects was never executed. This issue has been resolved. Now, any custom rule code will be executed as expected.

Prior to upgrading your database to V3.6.0.4.0, you must delete the following rules projects from your Rules Library in Configuration Manager:

- Rules Library\Client\RBI\RBI_ASM_Mapping

- Rules Library\Client\RBI\RBI_ASM_MappingFactory

If you have implemented custom rule code in this area, you should create a backup of your custom rules prior to deleting these projects. Then, after you upgrade your database, you can merge your custom changes with the upgraded rule code.

(TS ID: 88079)

Thickness Monitoring

- Meridium APM now supports the GE DMS Go and GE DMS Go+ devices. To use these devices, you must first install the supporting files on all the Meridium APM Framework machines that will be used to connect to the devices. An installer is provided for these files in the 3rd party distribution package in the Meridium APM distribution package.

  When using the GE DMS Go+, the Meridium APM system will refer to the device as the GE DMS Go.

  After you install or upgrade to V3.6.0.4.0, you will need to upgrade the supporting firmware for the GE DMS Go/DMS Go+ device. You can download the firmware update from GE here: http://www.ge-mcs.com/en/ultrasound/thickness-gauges/dms-go.html

  (TS ID: 94383, 88081, 88077)

- Previously, the drop down list in the **Task** section of the **Measurement Data Entry** page was populated with IDs comprised of both the **Task ID** and the **Task Source Type**. Now, the drop-down list in the **Task** section of the **Measurement Data Entry** page is populated with IDs comprised of only the **Task Entity ID**. (TS: 89118)

- Previously, an issue existed when both UT and RT analyses were used to populate the **Based on** field in a TML Group **Corrosion Analysis Summary** at the Equipment level. This issue has been resolved. Now, the **Corrosion Analysis Summary** page populates the **Based on** field with the proper TML analysis as expected. (TS ID: 86876)

V3.6.0.5.0

About V3.6.0.5.0

V3.6.0.5.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Connect

- APM Foundation

- Mechanical Integrity

- Meridium APM Framework

- Policy Manager

Resolved Issues

- APM Foundation

- Asset Safety

- Asset Strategy

- Failure Elimination

- Mechanical Integrity

- Meridium APM Framework

- Meridium Online

Enhancements

APM Connect

Beginning in V3.6.0.5.0, you can now take advantage of APM Connect, an integration framework. APM Connect will provide replacement technology for the Meridium APM Plug-In for DataStage, product adapters to load data into Meridium work processes, and the ability to connect to other data sources in the enterprise. Additionally, APM Connect will replace EAM Interfaces. Currently, replacements are available for SAP adapters for Equipment, Functional Location, and Work History. For more information, you can view the APM Connect documentation. (TS ID: 70441)

Note: An APM Connect Standard license is required to take advantage of the new functionality.

APM Foundation

mobileAPM and Operator Rounds

Business rules for creating Reading records have been improved, resulting in a performance increase when uploading readings from mobileAPM and devices in Operator Rounds. (TS ID: 99652)

Mechanical Integrity

NR13

Now, if an NR13 Full or General Inspection record is linked to both a Functional Location record and an Equipment Record, data from an NR13 Technical Data record will be displayed in the report when it is generated. (TS ID: 98295)

Meridium APM Framework

Dashboards

Previously, the dashboard timeout limit was 90 seconds. It has been increased to 5 minutes. (TS ID: 93197)

Policy Manager

The Create Production Event node is a new Action node available in Policy Manager. It can be used in policies to create new Production Event records.

Note: The Production Loss Accounting license is required to take advantage of the Create Production Event node functionality.

Additionally, the following two new fields have been added to the Create Recommendation node:

- Associated Reference

- Recommendation Priority

(TS ID: 90430)

Resolved Issues

APM Foundation

Custom Business Rules and State Configuration

Previously, when a custom rule was executed to automatically change the state of a record to a custom state, the new state would not be saved. This issue has been resolved (TS ID: 101730)

EAM Interfaces

Previously, when using a web service to update a reading in Operator Rounds, if the UTC field property for the Reading Taken Date field was set to *True*, and in the request, Reading Taken Date was made a key field, a duplicate Reading record was created instead of the existing record being updated. This issue has been resolved. (TS ID: 101713)

mobileAPM

- Previously, Routes that contained checkpoint conditions based on numeric Measurement Locations were not downloaded to a device. This issue has been resolved. (TS ID:101135)

- The V3.6.0.4.0 release contained an outdated version of the Android application for MobileAPM. An updated version is included in the V3.6.0.4.1 distribution package. If you are using the Android application for Meridium APM, you should install this updated version. (TS ID:101134)

- In V3.6.0.4.0, if you completed the following steps, the Route should have been removed from the device, but instead it was marked as done and included the **Inspection** Page:

    1. While the device is online, subscribe to a Route.

    2. Switch the device to offline mode.

    3. In the Meridium APM Framework, deactivate the Route.

    4. On the device, enter a reading on the Route and mark the Route as done.

    5. Bring the device back online.

    This issue has been resolved. Now, in this scenario, the Route will be removed from the **Inspection** page when you refresh the page. (TS ID: 96738)

Policy Manager

Previously, when you attempted to save a large Policy in Policy Manager, a size limit error message appeared. This issue has been resolved. (TS ID: 101891)

SAP Interfaces

Previously, the URL that you specified in the ITS URL field in SAP System records did not work properly in cases where the URL contained a query string. This issue has been resolved. (TS ID: 101765)

Asset Safety

Calibration Management

Previously, if a Calibration Event record was related to a Test Equipment record, after you received and saved calibration data from a device, the Sequence Number field in the corresponding Calibration Results records was populated incorrectly (i.e., the first record was populated with 2 instead of 1). This issue has been resolved. The sequence will now be populated correctly. (TS ID: 101527)

Asset Strategy

Asset Strategy Optimization

Previously, when creating or opening an ASO Analysis, if you added a strategy that contained existing ASO Analysis data, not all data in the existing strategies would be copied to the analysis you were creating or opening. This issue has been resolved. Now:

- When you create a new ASO Analysis using a System Strategy:

  - If any related Asset Strategy has an existing ASO Analysis, asset data in that analysis will be copied to the new ASO Analysis for the System Strategy.

- When you create a new ASO Analysis using a Unit Strategy:

  - If any related System Strategy has an existing ASO Analysis, system data in that analysis will be copied to the new ASO Analysis for the Unit Strategy.

- If any related System Strategy has *no* existing ASO Analysis, but an Asset Strategy related to that System Strategy *does* have an existing ASO Analysis, the asset data in that analysis will be copied to the new ASO Analysis for the Unit Strategy.

- When you open an existing ASO Analysis for a System Strategy:

  - If a new Asset Strategy is added to the System Strategy, and the Asset Strategy has an existing ASO Analysis, the asset data in that analysis will be copied to the ASO Analysis for the System Strategy.

- When you open an existing ASO Analysis for a Unit Strategy:

  - If a new System Strategy is added to the Unit Strategy, and the System Strategy has an existing ASO Analysis, the system data in that analysis will be copied to the ASO Analysis for the Unit Strategy.

  - If a new Asset Strategy is added to any of the related System Strategies, and if the new Asset Strategy has an existing ASO Analysis, the asset data in that analysis will be copied to the ASO Analysis for the Unit Strategy.

Additionally, because each ASO Analysis may have an unknown number of other scenarios besides the Proposed and Active Scenarios, when you create or open an ASO Analysis, only data from each Proposed and Active Scenario will be copied. (TS ID: 88490)

Reliability Centered Maintenance

Previously, when linking an Equipment record to an RCM Analysis, if the Equipment record was not directly related to a Site Reference record, an error occurred and the corresponding message stated that the asset does not belong to a Site Reference. This issue has been resolved. Now, in this scenario, the link will be created successfully whether the Equipment record is directly or indirectly related to a Site Reference record. (TS ID: 101759)

Failure Elimination

Generation Management

- Previously, when you generated the NERC GADS Event Report, you may have encountered the following format issues:

  - If text data in a field used in the report contained a carriage return, a line break was inserted in the report.

  - An unnecessary carriage return appeared at the end of the report.

  These issues have been resolved. (TS ID: 101755)

- Previously, when you generated the NERC GADS Event Report, the values from the Verbal Description field in corresponding capacity Incident records were sometimes truncated at the end of section C, line 02 in the report. This issue has been resolved. Now, if the values do not fit in the first line, they will carry over to the next line (section C, line 03). Values will only be truncated if they do not fit within two lines as expected. (TS ID: 101754)

Mechanical Integrity

Inspection Management

Previously, the lists in the Final Approver Name and Assigned To Name fields in an Inspection Recommendation record would not correctly populate with unique User IDs if the first and last names of two or more users matched. This issue has been resolved. (TS ID: 99797)

NR13

Previously, images were not attached to NR13 Inspection Reports if they were stored in a network folder location. This issue has been resolved. You can now

attach images as Reference Documents regardless of whether they are stored in a network folder, or stored in the database. (TS ID: 98036)

Risk Based Inspection (RBI)

- Previously, when the criteria to enable the **Link to RBI Component** link on the **TM Tasks** menu were met, the link would remain disabled. This issue has been resolved. (TS ID: 103917)

- Previously, the Years in Service field in a Criticality Ext. Corr. Deg. Mech. Eval. record did not display the correct value based on the date entered in the Date in Service field. This issue has been resolved. Now, the Years in Service field displays the correct value. (TS ID: 101753)

- Previously, if you linked a new Degradation Mechanisms record to an existing calculated RBI Analysis record, the values in the Rolled Up fields in Analysis Results tab of the RBI Analysis record would not be updated correctly after recalculating the analysis. This issue has been resolved. (TS ID: 101536)

- Previously, an incorrect parameter, Diameter InnerDiameter, was included in the Calculated Inventory for Gases formula. This issue has been resolved. In addition, Design Pressure and Design Temperature were used as parameters in the Calculated Inventory for Gases formula. Now, Design Pressure and Design Temperature have been replaced in the Calculated Inventory for Gases formula with Operating Pressure and Operating Temperature. (TS ID: 101532)

- Previously, when you imported new or modified RBI data from a Microsoft Excel file to the Meridium APM Framework using the **RBI Export and Import** page, the RBI Component *numeric* field values were

not converted to the respective units of measure. This issue has been resolved (TS ID: 68645)

Thickness Monitoring (TM)

- Previously, when you attempted to update Corrosion Analysis Settings records linked to certain assets, the Meridium APM application would stop responding, and then abort the operation. This issue has been resolved. (TS ID: 101758)

- Previously, after performing an Asset Corrosion Analysis, the Estimated Remaining Life field in an Asset Corrosion Analysis record linked to an Equipment record was not correctly displaying the most conservative value from the Estimated Remaining Life field among TML Corrosion Analysis records linked to the TMLs related to the associated TML Group records. This has been fixed. Now, the Estimated Remaining Life field will correctly display the most conservative value derived from linked TML Group records. (TS ID: 101535)

- Previously if the Short Term Corrosion Rate of a TML was set to *0* as a result of the Allowable Measurement Variance being applied, setting the Measurement Verified field to *Yes* on the last Thickness Measurement of the TML did not result in a change to the Short Term Corrosion Rate of the TML. Now, when the Measurement Verified field is set to *Yes* in this situation the Short Term Corrosion Rate of the TML will change from *0* to the calculated rate. (TS ID: 101534)

- Previously, if the TML Corrosion Analysis Settings included a Minimum Corrosion Rate value of *0* and a Corrosion Rate Variance value that was greater than *0*, when adding a Thickness Measurement reading to a Thickness Measurement Location record, the Verify Measurement field would be set to *Yes (Y)* regardless of whether this was the correct behavior. This has been fixed. Now, the Verify Measurement field is only set to *Yes (Y)* when expected. (TS ID: 101528)

- Previously, if a TML Corrosion Analysis record had a value of *0* in either the Custom Calculation A Corrosion Rate or Custom Calculation B Corrosion Rate field, the plot on the **TML Analysis Plot** page did not appear correctly. This issue has been resolved. Now, if a Custom Calculation Corrosion Rate field has a value of *0*, the value in the Minimum Corrosion Rate field in the linked TML Analysis Settings record will be used in place of the *0* value.

  If the value in the Minimum Corrosion Rate field is set to *0*, then:

  - If the values in both the Custom Calculation A Corrosion Rate and Custom Calculation B Corrosion Rate fields are *0*, no corrosion rate lines will be plotted.

  - If the value in one Custom Calculation Corrosion Rate field is *0*, and the value in the other Custom Calculation Corrosion Rate field is greater than *0*, then a corrosion rate line will be plotted based on the Custom Calculation Corrosion Rate field with a non-zero value. For example, if you set the value in the Custom Calculation A Corrosion Rate field to *0* and the Custom Calculation B Corrosion Rate field to any value greater than *0*, then only one corrosion rate line, corresponding to the value in Custom Calculation B Corrosion Rate, will be plotted.

  Points corresponding to measurements will be plotted regardless of whether any corrosion rate line is displayed.

  (TS ID: 88085)

Meridium APM Framework

Datasheets

Previously, when you defined the value in a field as a hyperlink, the size of the corresponding datasheet field was increased to the size of the underlying

hyperlink rather than the displayed text. This issue has been resolved. (TS ID: 101523)

Home Page

- In V3.5.1 and associated maintenance releases, when you logged in to Meridium APM in a Citrix environment, the Meridium splash screen did not always disappear when the Meridium home page appeared. This issue has been resolved. (TS ID: 101530)

- Previously, when you attempted to add a shared section to the **Home Page** through the **Edit Sections** link on the **Home Page Tasks** menu, the section was not saved. This issue has been resolved. (TS ID: 99214

Meridium APM Web Framework

Previously, when viewing query results on a page other than the first page, if you selected a hyperlinked result that launched an additional query, the results of this second query were not displayed correctly (i.e., the page number of the second query results was set incorrectly). This issue has been resolved. (TS ID: 101529)

Queries

- In V3.6.0.3.0 and V3.6.0.4.0, when providing prompts to a query in the **Enter parameter values** dialog box, the following issues existed:

  - After specifying one parameter value, the default value for the next parameter was removed.

  - If the default parameter value was % in a previous version, that value was not selected as the default value in V3.6.0.3.0 and V3.6.0.4.0.

These issues have been resolved. Now, the default parameter values will always be selected as expected. (TS ID: 101944)

- Previously, if you created a report from a query returning a hyperlink to the **Asset Criticality Analysis Definition** page, the hyperlink in the report did not open the expected page. This issue has been resolved. (TS ID: 101764)

- Previously, when viewing the results of a query, you could not use the mouse wheel to scroll through the query results unless you first selected the arrow to the left of a query result. This issue has been resolved. You can now use the mouse wheel to scroll after you click anywhere in the query results list. (TS ID: 101524)

Security and Accessibility

- Previously, when using LDAP integration, if you removed a user from a security group in an Active Directory, if the user was already included in other groups in the Active Directory, then that user was not removed from the Meridium APM Security Group after synchronizing. This issue has been resolved. Now, after you synchronize your Meridium APM records with the information in the Active Directory, a user will be correctly removed from the expected security groups. (TS ID: 68050)

- Previously, when attempting to log in to Meridium APM using a URL that included a User ID and password, the User ID was incorrectly treated as case sensitive, and certain characters (e.g., a hyphen) in the User ID would not be recognized, which could prevent you from logging in to the application. This issue has been resolved. (TS ID: 56207)

Meridium Online

Previously, when generating reports in the Meridium Online environment, users who did not have *Report Designer* permissions could encounter baseline

Meridium APM reports that they were unable to run, if those reports had associated subreports. This issue was known to exist for the following baseline reports:

- Asset Criticality Analysis Report

- Hazards Analysis Report

- What If Analysis Report

- LOPA Report

- Protective Instrument Loop Report

- SRS Report (under SIL)

This issue has been resolved. Now, users are able to run these reports as expected. (TS ID: 56155)

V3.6.0.6.0

About V3.6.0.6.0

V3.6.0.6.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

- Asset Strategy

- Documentation

- Installation, Upgrade, and System Administration

Resolved Issues

- APM Foundation

- Asset Health

- Asset Safety

- Installation, Upgrade, and System Administration

- Meridium APM Framework

- Mechanical Integrity

Enhancements

Localization

Language Support for mobileAPM

Support for localization has been added to the mobileAPM App. The language displayed in the mobileAPM App is determined by the setting for the Culture property of each user. If a user does not have a setting specified for the Culture property, the mobileAPM App will appear in *English* by default.

The following table contains a list of the languages that are available for use with mobileAPM. All languages are new to this release.

Language
Chinese (Simplified)
Dutch
French
German
Italian
Portuguese (Brazilian)
Russian
Spanish

APM Foundation

GE System 1 Integration

The *GE System 1 Integration* module is new in V3.6.0.6.0. This module allows you to collect event data from GE's System 1 condition monitoring software, which helps users quickly diagnose potential equipment and instrument health issues that can lead to equipment failure.

See the Meridium APM documentation for more information.

(TS ID: 117196)

Operator Rounds

- Operator Rounds now supports Motorola / Psion Omnii XT15 devices with 1 D barcode reader.

   When you upgrade to V3.6.0.6.0, you must complete the device-specific first-time deployment steps for each new device that you want to use, and then restart the device(s). (TS ID: 109619)

- Operator Rounds now supports eCom/Intermec i.roc C170-Ex devices with High Frequency RFID reader.

   When you upgrade to V3.6.0.6.0, you must complete the device-specific first-time deployment steps for each new device that you want to use, and then restart the device(s). (TS ID: 89866)

Asset Strategy

Performance for Asset Strategy Management and Asset Strategy Implementation has been improved. (TS: 112721)

Documentation

A consolidated list of the software and devices supported by Meridium APM is now available in the user documentation.

Installation, Upgrade, and System Administration

- The performance of the Signaturedatabase utility has been improved. (TS ID: 113659)

- Previously, when you applied a maintenance release, all assemblies that have changed since the base release were replaced with new files. Now, only assemblies that have changed since the last maintenance release are new files. All others are the same as the previous maintenance release. (TS ID: 107129)

Resolved Issues

APM Foundation

Catalog

Previously, when you clicked the **User ID** link on the **Users** dialog box to add permissions for a Security User, the correct Security User was not added to the **Permissions** tab on the **Folder Properties** dialog box. This issue has been resolved. (TS ID: 112733)

Dashboard

Previously, when you attempted to access the **Dashboard** page, the page did not load correctly. This issue has been resolved. (TS ID:112739)

mobileAPM

Previously, it sometimes occurred that a single reading (i.e., a unique timestamp and reading value) was added to the Meridium APM database as both a Readings record and a Reading in Error record, causing it to appear that duplicate readings were being added. This issue has been resolved. Now, a single reading will be added to the Meridium APM database only once,

regardless of whether it is recorded as a Reading record or Reading in Error record. (TS ID: 111187)

Operator Rounds (OPR)

Previously, when Measurement Location records were downloaded on a handheld device, all Measurement Location records for that specific date were downloaded and did not allow you to differentiate between Measurement Location records that were due at different times for that day. This issue has been resolved. Now, the operator can provide the desired time entry based on their shift to download only the Measurement Location records relevant to their assigned shift. (TS ID: 112734)

Queries

Previously, date fields always followed the format *yyy-MM-dd* on unformatted queries. This issue has been resolved. Now, these date fields will follow the date format defined by the user's culture setting. If the culture is not specified, the date format that is defined in the user's Windows Region and Language settings will be used. (TS ID: 76933)

Safety and Accessibility

Previously, when a user changed his or her password in the Security User record, there was a delay before the password was updated. This issue has been resolved. (TS ID: 112737)

Schedule Manager

Previously, the Schedule Manager was consuming more memory than necessary when running on the designated application server for an extended period of time. This issue has been resolved. (TS ID: 103890)

Asset Health

Previously, when new Reading records were added, the corresponding Health Indicator record was not always updated in a timely manner as expected. This issue has been resolved. (TS ID: 112738)

Asset Safety

Calibration Management

After saving an automated Calibration, you can open the Calibration Event record from a list in the **Calibration Events List** window. Previously, if you made changes to the Calibration Event record, and you then attempted to close the Calibration Event record without saving, the **Save Changes** dialog box would continue to appear, and you were unable to close the record. This issue has been resolved. (TS ID: 112735)

Installation, Upgrade, and System Administration

Installation

Previously, certain custom macros were not uploaded during the installation or upgrade process. As a result, an error occurred when you attempted to complete the corresponding workflow. This issue has been resolved. (TS ID: 112736)

Database Comparison Tool

- Previously, when you clicked the ellipsis button on the Database Comparison Tool it directed you to the file location stored in the DbUpgZipPath registry regardless of what appeared in the **Path to Database Upgrade content** field. This issue has been resolved. Now, when you click the ellipsis button you will be directed to the file location that appears in the **Path to Database Upgrade content** field. If the **Path to Database Upgrade content** field is empty then you will be directed to the file location stored in the DbUpgZipPath. (TS ID: 114382)

- The Database Comparison tool now uses ACE for exporting reports to Microsoft Excel files. JET is no longer supported. (TS ID: 59356)

Database Upgrade Manager

Previously, in the Database Upgrade Manager, the external utilities would time out after 2 hours. This issue has been resolved. Now, the external utilities execution timeout is configurable. This value has to be set under **ExternalUtilityTimeout** in the **DBUpgradeUI.exe.config** file. This value is in *milliseconds* and the external utility will run for the specific milliseconds. If this value is set to -1 then the external utility will never time out. (TS ID: 113257)

Meridium APM Framework

Catalog

Previously, when a user with Create permissions to the Catalog folder tried to save a newly created query, an error message appeared indicating they had insufficient privileges, but the query would still save to the Meridium APM Catalog. This issue has been resolved. Now, the user can save the new query successfully. (TS ID: 103326)

Home Page

Previously, when you resized the APM Framework window and then logged out, the system stored your preference. Now, when you resize the APM Framework window, log out and then log back in, the APM Framework window will always open in the maximized state. (TS ID: 65013)

Mechanical Integrity

Risk Based Inspection (RBI)

Previously, the Estimated Half Life value was only present on the Criticality Internal Corrosion Degradation Mechanism Evaluation. Now the Estimated Half Life value has been added to the Criticality External Corrosion Degradation Mechanism Evaluation. The Estimated Half Life value from the Criticality External Corrosion Degradation Mechanism Evaluation is used by Appendix_F and Recommendations will only be generated by Appendix_F when the Criticality External Corrosion Degradation Mechanism Evaluation is present for the analysis.

Note: The Estimated Half Life value on the Criticality External Corrosion Degradation Mechanism Evaluation is not used by any other policies for Recommendation generation.

A new field, *Has Internal Corrosion DME*, has also been added to the RBI Criticality Analysis. This field is used for Recommendation generation by policies Appendix_G, Appendix_H, and Appendix_I. To implement these changes you will need to re-import the RBI policies Appendix_F, Appendix_G, Appendix_H, and Appendix_I and the Strategy Mapping Configuration record 102_MI_STRMAPP. (TS ID: 103327)

Thickness Monitoring

- Previously, the TMLs Below T-min field on the Corrosion Analysis Summary page displayed all TMLs that had measurements below T-min without regard to the analysis type of the TML (e.g., an RT TML was displayed in the TMLs Below T-min field of UT Corrosion Analysis). This issue has been resolved so that the TMLs Below T-min field only displays

TMLs that have the same analysis type as the Corrosion Analysis Summary page. (TS ID: 121582)

- Previously, if the TML Corrosion Analysis Settings included a Minimum Corrosion Rate value of *0* and a Corrosion Rate Variance value that was greater than *0*, the last reading on the Thickness Measurement would have the Verify Measurement field set to Yes (*Y*) whenever the last reading was less than the previous reading. This has been fixed. Now if the TML Corrosion Analysis Settings have a Minimum Corrosion Rate value of *0* and a Corrosion Rate Variance value that is greater than *0*, the last reading will have the Verify Measurement field set to No (*N*) as expected when the last reading is less than the previous reading. (TS ID: 112731)

- Previously, when you attempted to update Corrosion Analysis Settings records linked to certain assets, the Meridium APM application would stop responding, and then abort the operation. This issue has been resolved. (TS ID: 101758)

- Previously, on the **TM Measurement Data Entry** page, when you created a measurement value for a Thickness Measurement Location record that was equal to the thickness measurement location's base nominal thickness, the nominal flag was incorrectly selected as true. This issue has been resolved. (TS ID: 101525)

V3.6.0.7.0

About V3.6.0.7.0

V3.6.0.7.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

- Asset Strategy

- Failure Elimination

- Installation, Upgrade, and System Administration

Resolved Issues

- APM Foundation

- Asset Safety

- Asset Strategy

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

- Meridium APM Framework

- Documentation

IMPORTANT: The documentation for applying V3.6.0.7.0 that is included in the distribution package (i.e., that will be accessible via the Meridium APM Framework after you upgrade to V3.6.0.7.0) is incorrect. Please use the documentation available on the Meridium APM documentation website when you apply V3.6.0.7.0.

Enhancements

APM Foundation

APM Connect

Meridium APM V3.6.0.7.0 supports the current version of APM Connect. (TS ID:143196)

GE System 1 Integration

In order to streamline the process of importing and configuring tags, you now modify the Technology, Description, and Health Indicator Limit fields in a GE Tag record at the same time that you map the tags to assets. (TS ID: 126141)

Asset Strategy

Asset Strategy Optimization (ASO)

Previously, when using ASO in Meridium Online, you could not customize data reports beyond the pre-established tabs in Asset Strategy. Now, the ASO data handling has been integrated with Microsoft Business Intelligence Development Studio (BIDS). Meridium, powered by BIDS, allows you to view your data on a more granular level. (TS ID: 144084)

Failure Elimination

Production Loss Accounting (PLA)

Note: To implement these PLA enhancement for 3.6.0.7.0, you must run a database script *prior* to upgrading your database to 3.6.0.7.0 and another script *after* upgrading your database. Refer to the instructions for applying V3.6.0.7.0 for additional information.

- Previously, you were allowed to view and modify Production Event record from the **Production Event Management** page only. Now, when you link a Production Event record with a Production Loss record, you

can view and modify the Production Event record from the **Production Data Entry** page also. (TS ID: 130846)

- You can associate an Event Code with a Production Unit. A new field, Even Code Selector, has been added to the Production Unit datasheet. When you associate a Production Event with the Production Unit, only the Event Codes that you associated with the selected Production Unit will be available for linking. That means, in a Production Event, you have the capability to select only the Event Codes that are associated with the Production Unit that you have associated with a Production Event. (TS ID: 125749)

- Previously, you were allowed to account for planned production *only*. If you had produced more than the planned production, you were required to update the planned production values to account for the additional production. Now, you can account for production more than the planned production *without* updating the planned production values. A new column, Over Production, has been added to the Production Data grid and the **Production Data Details** grid. Additionally, Over Production appears as a category at the top of a **Production Summary** graph. (TS ID: 115766)

- You can define the Acceptable Loss percentage to specify the threshold value for the loss that can be ignored when calculating the overall loss for a Production Plan. Any losses below the Acceptable Loss percentage will be ignored. To facilitate this, a new setting, Acceptable Loss, has been added to the Administration link. A new column, Acceptable Loss, appears on the Production Data grid. (TS ID: 109609)

- Beginning in V3.6.0.7.0, you can take advantage of State Management in PLA. State Management allows you to:

  - View the changes.

  - View the time when the changes were implemented.

- Identify who made the changes.

- Identify who approved the changes.

State Management in PLA will facilitate approval processes for the following families:

  - Production Profile

  - Production Plan

  - Production Event

  - Production Data

  - Production Loss

The option shown in the following image has been added to the grid for each of above families:
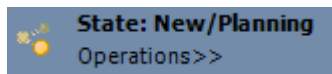
The following table lists the baseline states and indicates which State Configuration Roles are assigned to each state and corresponding operation:

State	Operation	Security Group
New/Planning	Propose	MI Production Loss Accounting Administrator MI Production Loss Accounting Manager MI Production Loss Accounting User
Pending/Approval	Approve Reject	MI Production Loss Accounting Administrator MI Production Loss Accounting

		Manager
Approved	Close **Note:** This operation is applicable only to Production Plan and Production Data.	MI Production Loss Accounting Administrator MI Production Loss Accounting Manager
	Edit	MI Production Loss Accounting Administrator
Complete **Note:** This state is applicable only to Production Plan and Production Data.	Close **Note:** This operation is applicable only to Production Plan and Production Data.	MI Production Loss Accounting Administrator

(TS IDs: 63674, 63673, 63672, 63673, 109602)

- You can define profile margin in addition to the Default Margin. Defining additional profile margin will allow you to account for production losses more accurately when the losses are related to quality. In such cases, the products are off specifications and provide less profit than if they had complied with the specifications. To facilitate this, a new datasheet, Profile Margin, has been added to the Production Profiles.

  After you have defined additional margin, you can select the margin value associated with a specific loss. A new column, Margin ID, has been added to the Losses grid.

  When you select profile margin other than the Default Margin, the Cost of Losses is calculated using the following equation:

  Cost of Losses = Loss (Default Margin) + Σ Loss (Additional Margin)

  Where,

- Loss (Default Margin) = (Loss Quantity * Default Margin)

- Loss (Additional Margin) = (Loss Quantity * (1 - (Additional Margin/Default Margin)) * Default Margin)

(TS IDs: 63671, 109605, 122811)

Installation, Upgrade, and System Administration

- *Oracle 12.1.0.2* is now supported (i.e., used in the Meridium Inc. testing environment). (TS ID: 143245)

Resolved Issues

APM Foundation

Asset Criticality Analysis (ACA)

Previously, when you ran an Asset Criticality Analysis query, right-clicked on any **Analysis ID** in the query results, and selected **Open in explorer**, an error message appeared indicating that the URL was broken. This issue has been resolved. (TS ID: 116483)

Dashboard

- Previously, if the query used by a dashboard widget contained more than one prompt, the widget did not display the expected information. This issue has been resolved. (TS ID: 121873)

- Previously, when a dashboard displayed the results of a query that returned hyperlinks, "Null" as an invalid link was returned when the field did not contain a value. This issue has been resolved. Now, in this scenario, the fields without a value remain blank.(TS ID: 92579)

EAM Interfaces - SAP

Previously, when extracting a record with more than 2,100 related records, such as a Functional Location record with 6,000 installed Equipment, the following error message appeared: The incoming tabular data stream (TDS) remote procedure call (RPC) protocol stream is incorrect. Too many parameters were provided in this RPC request. The maximum is 2100. This issue has been resolved. (TS ID: 131684)

GE System 1 Integration

Previously, when you validated a policy in which the *GE Tag Events* output from a GE Tag node was used, the field corresponding to the Start Date/Time field in GE Tag Event records was incorrectly labeled "*Updated* Date/Time" in the Validation pane. This issue has been resolved. (TS ID: 126137)

LDAP

Previously, if you had configured single sign on (SSO) to access the Meridium APM application using Windows NT authentication, and if you logged in and logged off the application multiple times within a short period of time, the NT account was locked. This issue has been resolved. (TS ID: 116128)

mobileAPM

Previously, when creating a recommendation with a status other than **Created**, the attempt failed and an error was logged in the event viewer. Now, creating a new recommendation is limited to a default status of **Created**. (TS ID: 96899)

Online Analytic Interfaces - AMS Analytics

Previously, when you added new items to the **Minimum Criticality** filter in the **AMS Asset Summary Dashboard** and then navigated away from the dashboard, the values were not retained. This issue has been resolved. (TS ID: 90132)

Operator Rounds

- Previously, in Record Manager, when viewing a Measurement Location record with no related Task records, if you created a new Reading record via the **Create Reading** link on the Associated Pages menu, an error occurred when you attempted to save the Reading record. This issue has been resolved. (TS ID: 134076)

- Previously, in the Meridium APM Schedule Management for a given route, if you selected the **Yearly** recurrence pattern with a next occurrence (e.g., The first day of January of every 1 year(s)) with a given **Start** time, the **Next Date** time was always reset to 12:00 A.M. This issue has been resolved. (TS ID: 131689)

- Previously, when using the Motorola/ Psion Omnii XT15 hand held device, if you scanned an unknown tag ID (i.e., a tag not found on currently downloaded Routes/MLs), a message appeared stating that the barcode you just scanned is unknown. This was expected. However, the message did not disappear until you selected **OK** several times. This issue has been resolved. (TS ID: 124087)

- Previously, when using the Motorola/ Psion Omnii XT15 hand held device with 1 D barcode reader, when using the **Copy Scan** feature, the background of the entry field blinked repeatedly after a barcode was scanned and the ID may not have been copied as expected. This issue has been resolved. (TS ID: 124075)

Asset Safety

Calibration Management

- Previously, when you accessed a Calibration record and attempted to scroll down the datasheet, the Meridium APM application sometimes became unresponsive. This issue is now resolved. (TS ID: 131691)

- Previously, the following issues existed in Calibration Management:

  - When you deleted a Calibration record, the Test Equipment records linked to the Calibration record were also deleted. This issue has been resolved.

  - While performing an automated calibration, when you transferred data from the device using the *Receive from Device* feature, the Test Equipment record was not populated correctly. This issue has been resolved.

  - Due to the issue described above, the relationship between the Calibration and the Test Equipment was not established. This issue has been resolved. The corresponding Test Equipment record is now populated correctly, provided that it was fully configured and contained the exact Manufacturer, Model, and Serial Number of the device prior to performing the calibration.

  These issues have been resolved. (TS ID: 131688, 102412)

SIS Management

Previously, the diagram canvas in protective instrument loop (PIL) allowed you (under certain circumstances) to modify a protective loop in such a way that the protective loop did not contain the minimum number of elements. If you subsequently opened the protective loop with the incorrect minimum number of elements, an error similar to this one appeared: "Opening a PIL error: Index was out of range. Must be non-negative and less than the size of the collection." This issue has been resolved. (TS ID: 102409)

Asset Strategy

Asset Strategy Implementation

Previously, you were not able to open an Implementation package if the **Filter Package By Implementation Roles** option was selected on the **Asset Strategy Management – Implementation Packaging** page. This issue has been resolved. (TS ID: 131705)

Asset Strategy Management (ASM)

Previously, when adding new items to the Implementation Package in ASM, the newly added items in the hierarchy tree were not highlighted (focused). This issue has been resolved. (TS ID: 131704)

Asset Strategy Optimization (ASO)

Previously, the following issues existed in ASO:

- When you opened a Global Event, no value was displayed in the **Driver Type** column, although a Driver Type value was defined for the Global Event.

- When you opened the Simulation results, and then selected the **Resources** tab, an error message appeared.

These issues have been resolved. (TS ID: 144066)

Reliability Centered Maintenance (RCM)

Previously, due to a SQL syntax bug, customers using an Oracle database for APM received an Oracle error instead of a Meridium error when trying to access records that could not be displayed due to Data Filters, Security or other bad data scenarios. This issue has been resolved. (TS ID: 131690)

Failure Elimination

RCA

Previously, on the **RCA Preserve Failure Data Item** datasheet, the values in the Frequency of Alert After Due Date field did not translate correctly to French. This issue has been resolved. (TS ID: 131686)

Installation, Upgrade, and System Administration

Database Upgrade Manager

- Previously, client-side rule projects were read-only by default. The database upgrade process has been changed so that client-side rule projects can now be modified, by default. This allows changes to be made to rules projects if required. (TS ID: 135348)

- Previously, during an Application Server installation or upgrade, a single compressed database content file, whose file name contained **MI_DB_Master**, was installed in the folder **C:\Meridium\DbUpg**. **MI_DB_Patches**, may be installed in the folder **C:\Meridium\DbUpg** during an Application Server installation or upgrade. As a result, beginning with V3.6.0.7.0, when initiating the database upgrade process via the Database Upgrade Manager application, on the **Connection Information** screen, in the **Path to Database Upgrade content** cell, the user must specifically select the compressed database content file whose file name contains **MI_DB_Master,** not the file whose file name contains **MI_DB_Patches.** (TS ID:128247)

- Previously, in the Database Upgrade Manager, record and links validation would time out after 30 seconds. This issue has been resolved. Now, the record and links validation timeout is configurable. This value has to be set under CommandTimeout in the RecordAndLinksValidation.exe.config file. This value is in seconds, and setting it will cause the validation to run for the specified number of seconds. (TS ID: 72901)

Installation

Previously, in Meridium V3.6.0 Maintenance Releases beginning with V3.6.0.5.0, during the Compile Projects step of the Database Upgrade Process, a failure related to the RBI_ASM_Mapping and RBI_ASM_MappingFactory rule projects would occur. Unless specific precautions were taken, this failure would prohibit the delivery of client-side rule projects. This issue has been resolved. The Database Upgrade Manager has been modified such that, during an upgrade to V3.6.0.7.0, client-side RBI_ASM_Mapping and

RBI_ASM_MappingFactory rule projects will be delivered properly during the Database Upgrade process. (TS ID: 131696)

Mechanical Integrity

Inspection Management

- Previously, when you attempted to delete a reference document from an Inspection record, an error message appeared. This issue has been resolved. (TS ID: 122146)

- Previously, a secured user with an Inspector role could not create an Inspection Task because he or she lacked the proper permissions. This issue has been resolved. *View* and *Insert* privileges for the Inspection role have been added to the Task Execution entity family, the Has Event Execution relationship family, and the Has Task Execution relationship family. (TS ID: 94778)

Risk Based Inspection (RBI)

- Previously, the documentation did not include an upgrade step to modify the CorrosionFactors records so that they are correct with respect to API 581 standards. The upgrade step is now included in the RBI upgrade workflow, as well as the instructions for applying V3.6.0.7.0.

  Note: You must perform this step only if you are upgrading your database from a version prior to V3.6.0.3.0 and you have not already completed this step as a part of a previous upgrade.

  (TS ID: 131698)

- Previously, when working with an RBI Analysis, the values displayed in some fields in the **Consequence Evaluations**, **Degradation Mechanism Evaluations**, and **Degradation Mechanism** tabs were not formatted correctly. This issue has been resolved. (TS ID: 131903)

- Previously, when you attempted to generate a recommendation for an RBI Analysis on a PRD Component, the recommendation generation failed. This issue has been resolved. (TS ID: 127060)

Thickness Monitoring

- Previously, it took a significant amount of time to load data on the **TM Measurement Data Entry** and the **TM Initial Measurement Data Entry** pages. This issue has been resolved. (TS ID: 138333)

- In versions 3.5.1.4.0 and later, changes made to support the GE DMS Go datalogger caused pre-existing devices connected to a PC via a serial port to stop working. This issue has been resolved. (TS ID: 131700)

- Previously, when the Nominal thickness was entered on the **Thickness Measurement Initial Measurement Data Entry** page, the Nominal flag did not correctly set for all of the TMLs in the selected TML group. This caused the Corrosion Report for the selected TML Group to have incorrect renewal dates. This issue has been resolved. (TS ID: 131687)

- Previously, an issue existed with values that were not being cleared in TML Corrosion Analysis records that were associated with a TM Analysis in which you included multiple Thickness Measurement Location records where the most recent measurement data was associated with a skipped measurement. In order to understand this issue, it is important to first understand that when you include skipped measurements in a TM Analysis, the following fields are populated automatically in the associated TML Corrosion Analysis record when the TML controlling corrosion rate is *less than* the asset controlling corrosion rate:

  - Asset Average Corrosion Rate

  - Asset Average Corrosion Rate Remaining Life

- Asset Average Corrosion Rate Retirement Date

- Asset Average Corrosion Rate Next Inspection Date

In addition, if you create a Thickness Measurement record where the most recent measurement data is associated with a skipped measurement, these fields should be cleared automatically when you recalculate the TM Analysis.

Previously, in a TM Analysis that included skipped measurements, where the most recent measurement data for more than one TML was associated with a skipped reading, if you created a Thickness Measurement record for one of these TMLs, the fields shown in the preceding list were not cleared as expected. This issue is best understood through an example.

Assume that a TM Analysis contains two TMLs: *TML01* and *TML02*. The following Thickness Measurement records exist for *TML01*.

TML01	
Reading	Thickness Measurement
1	.1-01/01/2000
2	.15-07/01/2000
3	.2-01/01/2000

Additionally, the following Thickness Measurement records exist for TML02.

TML02	
Reading	Thickness Measurement
1	.16-01/01/2000

TML02	
2	.18- 07/01/2000
3	.19- 01/01/2001

Now, assume that you created a Measurement Not Taken record for *TML01* for the reading scheduled on July 1, 2001. At this point, the measurement data associated with *TML01* would look similar to the following table.

TML01	
Reading	Thickness Measurement
1	.1- 01/01/2000
2	.15- 07/01/2000
3	.2- 01/01/2000
4	07/01/2001 - MNT

In this scenario, if you created a Thickness Measurement record for the reading scheduled for the TML on January 1, 2002, the appropriate fields in the associated TML Corrosion Analysis record would have been cleared as expected.

If, however, you created a Measurement Not Taken record for *TML02* when you created one for *TML01* (i.e., July 1, 2001)…

TML02	
Reading	Thickness Measurement
1	.16- 01/01/2000
2	.18- 07/01/2000
3	.19- 01/01/2001
4	07/01/2001 - MNT

…the appropriate fields would not be cleared as expected when you created the Thickness Measurement record for *TML01* on January 1, 2002 and recalculated the TM Analysis.

As a result of these fields remaining populated, their values were used as inputs to the calculations that determine the Scheduled Next Inspection Date value in the TML Corrosion Analysis record.

This issue has been resolved. Now, when you create a Thickness Measurement record and the most recent measurement data for more than one TML is associated with a skipped measurement, the values in the fields listed above will always be cleared when you recalculate the TM Analysis, and therefore, they will not be used in calculating the Scheduled Next Inspection Date. (TS ID: 131692)

- Previously, on the TM TMLs/Measurements page, the corrosion rate did not get updated properly when the Measurement Status Indicator field in the Measurements pane was changed. This issue has been resolved. (TS ID: 118817)

- Previously, when you had an open Thickness Measurement record, every time that you selected the Readings ellipsis button, the value in the Thickness Measurement field was erroneously multiplied by 25.4. This issue has been resolved. Now, if you have an open Thickness Measurement record and you select the Readings ellipsis button, the value in the Thickness Measurement field will not be effected. (TS ID: 72867)

Meridium APM Framework

Datasheets

Previously, when using certain Windows operating systems, the User Help Text defined for fields did not appear as tooltips when you hovered the mouse over the corresponding fields on datasheets. This issue has been resolved. The User Help Text will now appear as tooltips regardless of the operating system you are using. (TS ID: 130654)

Documentation

- Previously, configuring long text queries for SAP notifications was documented as a feature of the SAP Interfaces. However, long text queries for SAP notifications are exclusively used for RBI recommendations. The documentation has been adjusted so that configuring long text queries for SAP notifications is now documented within the RBI documentation. (TS ID: 131701)

- Previously, in the Thickness Monitoring documentation, the equation and example provided for the Statistical Corrosion Rate calculation was incorrect. This issue has been resolved. (TS ID: 131697)

V3.6.0.8.0

About V3.6.0.8.0

V3.6.0.8.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

- Mechanical Integrity

Resolved Issues

- APM Foundation

- APM Connect

- Asset Strategy

- Configuration Manager

- Documentation

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

Enhancements

APM Foundation

Core Analysis

RScripts have been added to Meridium APM. RScripts expand the baseline Meridium APM Framework application by allowing you to create scripts using R code. RScripts are then executed using Policy Manager. To take advantage of the new functionality, DeployR Open 7.3 and Revolution R Open 8.0.0 must be installed on the Meridium APM Application Server. (TS ID: 156993)

mobileAPM

Previously, in MobileAPM, if a secondary family was added using the Asset Hierarchy Tool, an issue preventing the user from viewing assets occurred. This issue has been resolved. Now, even if a secondary family has been added using the Asset Hierarchy Tool, MobileAPM users are able to view assets normally. (TS ID: 134294)

Policy Manager

The R-Script Node has been added to support new functionality in Meridium APM. The R-Script Node allows you to execute RScripts created and stored in the Catalog. (TS ID: 156993)

Queries

- The unit of measure (UOM) is now included in the column header when the query returns data with a defined UOM. If the query is run in formatted mode, the runtime UOM is shown, otherwise, the baseline UOM is displayed. (TS ID: 156237)

- If a query returns multiple pages of records, "Page 1 of Multiple Pages" is now displayed in the header. When you click a navigation link in the footer, the header message changes to reflect the current page out of the total number of pages in the query. (TS ID: 156204)

Resolved Issues

APM Foundation

EAM Interfaces

Previously, when using the **EAM Interfaces** to load data into your Meridium APM system, empty or null values in key fields prevented the recognition and updating of existing records, possibly resulting in a duplicate record being created. This issue has been resolved. (TS ID: 151741)

Operator Rounds

- Previously, when using the APM Mobile Framework with RFID tags, the following issues may have occurred:

  - While viewing a recommendation, when you selected the **Copy Scan** button, and then scanned a tag, the application stopped responding.

  - When using a handheld device with a high frequency RFID reader, when you pressed the scan button once, the tag was scanned twice.

  - When you closed the application, APM processes continued to run.

  These issues have been resolved. (TS ID: 156227)

- Previously, when using eCom handheld devices to scan high frequency RFID tags, the scanning functionality did not operate as expected. This issue has been resolved. (TS ID: 156225)

- Previously, when using eCom handheld devices with numeric keyboards, the scanning functionality did not operate as expected. This issue has been resolved. (TS ID: 156224)

- Previously, when using high frequency eCom ci70 handheld devices, the **Results** screen would be displayed when a scan id matched a Measurement Location. This issue has been resolved and the matching Measurement Location record is now displayed. (TS ID: 156222)

- Previously, when you used Operator Rounds on a handheld device, the date format displayed on the device did not match the Culture setting of the user. This issue has been resolved. (TS ID: 156221)

- Previously, in the Meridium APM Framework, when you selected an existing Measurement Location in a Route, the sequence position of the Measurement Location could unexpectedly change to last location in the Route. This issue has been resolved. Now, the sequence positions of Measurement Locations will not change unless you specifically modify them. (TS ID: 131393)

Process Data Integration

Previously, when viewing a Xi Tag record in Meridium APM, the **Process Data** link failed to display the associated historical data. This issue has been resolved. (TS ID: 152464)

Query

Previously, when building queries, inactive Entity Families and Relationship Families could be displayed in lists of selectable options. This issue has been

resolved. Now, when building queries, inactive families are not displayed in these lists. (TS ID: 118755)

APM Connect

Work Management Adapter

Previously, when attempting to harmonize Task(s) with SAP, the **Default SAP System?** check box had to be selected in Meridium Enterprise APM in order to facilitate the harmonization. The issue has been resolved. Now, the check box does not need to be checked for the Task(s) to be harmonized. (TS ID: 156228)

Work Process Adapter

Previously, only Super Users were able to insert, update, and delete Taxonomy records and relationships. This issue has been resolved. Now, members of the CMMS Administrator User security group have all permissions and members of the CMMS User security group have view, insert, and update permissions. (TS ID: 160258)

Asset Strategy

Asset Strategy Management

Previously, when modifying Actions in ASM promoted from an RCM or FMEA analysis, Meridium APM's performance would degrade. This issue has been resolved. (TS ID: 150206)

Configuration Manager

- Previously, when assigning State Configuration Roles, the **Available Users** section in the **Assign Users** window did not support data filtering. This caused an error when you assigned a role to a user. This issue has been resolved. (TS ID: 156233)

- Previously, when you copied a user with a Timezone setting, an error occurred. (TS ID: 150032)

Documentation

- In the Policy Manager documentation, the directions for specifying the **Rule Path** in the **Properties** window for the Rule node incorrectly stated that you could browse to a path by clicking the `···` button. The documentation should have stated that the path must be typed manually. This issue has been resolved. (TS ID: 137992)

- In the Configuration Tools section of the APM Foundation documentation, the *Privileges Associated with the MI Security Role* topic incorrectly stated that members of the MI Security Role Security Group cannot access any of the family-management features. The documentation should have stated that members of the MI Security Role Security Group have access to the following family-management features: Compile Rules, Run DB Validation, and Manage Content Validation. (TS ID: 156234)

Failure Elimination

RCA

Previously, on the **Team** page in RCA, values in the **Security Privileges** column were not properly translated to German. This issue has been resolved. (TS ID: 141992)

PLA

- Previously, on the **Production Data Entry** page, in the **Production Data** tab, when you double-clicked any cell in the **Actual** or **Losses** column, selected the **Back** navigation button, and then selected the **Forward** navigation button, an error appeared indicating that an object reference error occurred. This issue has been resolved. (TS ID: 143551)

- Previously, on the **Production Data Entry** page, in the **Production Data** tab, the values in the **Actual** and **Over Production** columns were not

displayed using specific number of decimal places. This issue has been resolved now. The values on the **Production Data Entry** page will be displayed using the value that you specify in the **Display Precision** dialog box in the **Administration** section. (TS ID: 121587)

Installation, Upgrade, and System Administration

Database Upgrade Manager

Previously, when upgrading Meridium APM Database from V3.6.0.5.0, if a large number of entities was being updated, the Database Upgrade Manager may have stalled at **step_99_PostProcess\91_v350_AHMUpgrade.cmd** due to the system running out of memory. This issue has been resolved. (TS ID: 156229)

Installation

In V3.6.0.6.0, when you viewed the **About Meridium** window in the Meridium APM Web Framework, Version 3.6.0.5.0 was incorrectly displayed. This issue has been resolved. (TS ID: 150025)

Mechanical Integrity

Inspection Management

Previously, when you attempted to copy a Full or General Inspection record that contained a Task Addressed, an error occurred. This issue has been resolved. (TS ID: 156517)

Risk Based Inspection (RBI)

- Previously, when copying an Asset Criticality Analysis in RBI, the value in the Analysis Start Date field did not display correctly. This issue has been resolved. The Analysis Start Date field now displays the current date and time when copied. (TD IS: 156236)

- Previously, in Risk Based Inspection (RBI), when you copied an analysis from one component to another, the value in the Name and/or the Location ID field of the new analysis record still referenced the original component. This issue has been resolved. In this scenario, the Name and Location ID are now updated to reflect the new component. (TS ID: 141997)

- Previously, when you created a Work Management Item (WMI) from a RBI Recommendation, an object reference error occurred when you created a SAP Notification if the ASI for SAP license was not activated. This issue has been resolved. (TS ID: 101729)

Thickness Monitoring

- Previously, in Thickness Monitoring, when you logged in as a Metric User and entered nominal measurements in a Thickness Measurement Location record, the **Nominal** check box on the **TM Initial Measurement Data Entry** page was not checked if the Nominal Thickness value was an odd number, random number, or a value with decimals. This issue has been resolved. (TS ID: 156232)

- Previously, when calculating Allowable Stress and Flow Stress in Thickness Monitoring, the value in the Design Temperature field was not correctly factored into the calculation. This issue has been resolved. Now, the Design Temperature is properly utilized in the Allowable Stress and Flow Stress calculations. (TS ID: 155072)

V3.6.0.9.0

About V3.6.0.9.0

V3.6.0.9.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

- Mechanical Integrity

Resolved Issues

- APM Foundation

- Asset Safety

- Configuration Manager

- Documentation

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

- Meridium APM Framework

You can also view the full APM Connect release notes.

Enhancements

APM Foundation

R Scripts

In addition to the R Server, the third-party software that supports R Scripts must now be installed on every Policy Execution Server. (TS ID: 170859)

mobileAPM

mobileAPM is now compatible with iOS 9. (TS ID: 172782)

Mechanical Integrity

RBI 581

The RBI 581 module now provides an end to end Risk Based Inspection solution in Meridium APM based on the 3rd edition of the API RP 581 Risk Based Inspection Methodology. This release expands the initial API 581 solution in V3.6.0.8.0. Analyses in Risk Based Inspection are now identified as Quantitative Analyses (supporting 581) and Semi-Quantitative Analyses (supporting the existing 580 risk calculator provided in the baseline Risk Based Inspection Module). The following concepts are introduced with this module:

- Calculated corrosion rates for thinning damage mechanisms.

- Cracking susceptibility calculations.

- Inspection Planning based on Risk and Damage Factor targets, which is used to provide comprehensive results for Quantitative Analyses and create related inspection tasks.

For a more details, please refer to the Risk Based Inspection documentation. (TS ID: 162402)

Resolved Issues

APM Foundation

Asset Health

Previously, when you processed some Xi Tag readings from a Xi system having 1000 or more Xi Tags and you used an Oracle database, some of the readings were not properly updated. This issue has been resolved. (TS ID: 171933)

EAM Interfaces - SAP

Previously, when you had a parent child link between functional location records, if you ran the Functional Location Extraction Interface for the child record prior to running it for the parent record, the link between the two records in Meridium APM was deleted. This issue has been resolved. (TS ID: 168182)

Help Menu

Previously, the **About Meridium APM** dialog box displayed the *description* of the data source to which you were connected, rather than the data source *name*. This issue has been resolved. (TS ID: 168271)

mobileAPM

Previously, Functional Location records associated with equipment and having the plus sign character (+) as a prefix to the Location or Record ID could not be viewed as expected in mobileAPM. This issue has been resolved. (TS ID: 139488)

Policy Manager

Previously, the following issues related to Xi Tag nodes existed:

- When you opened a policy containing an Xi Tag node, an error may have occurred.

- When you created a new policy with a Xi Tag node, the Xi Tag node was not available for selection.

(TS ID: 175084)

Recommendation Management

Previously, when viewing a query configured to return a multi-value select option, the default value was not displayed. This issue has been resolved. (TS ID: 156209)

Search

Previously, when performing a search in Meridium APM Framework, Asset Criticality Analysis, Asset Strategy, or RCA an error message may have been received when viewing the **Record Manager** screen. This issue has been resolved. (TS ID: 168187)

State Configuration

- Previously, when the Meridium General Recommendation family was configured with no role assigned for the initial state and the **Require A Specific User to be Assigned to State** option set to false, when you assigned a user to other states of a Meridium General Recommendation in Meridium APM, an error was displayed before you could save the record. (TS ID: 129127)

- Previously, when working with State Management, the user who assigned the initial state of a record could also be assigned for future states, regardless of whether or not the user was assigned to the associated role. This issue has been resolved. (TS ID: 129124)

Queries

- Previously, for users with a culture setting, when you ran a query using a multi-value select option, default values were not selected in the drop down box on the parameter values window. This issue has been resolved. (TS ID:168192)

- Previously, when you ran a query and clicked the **Run Query** link more than once, the records were not displayed as expected even though the total record count was shown. (TS ID: 168186)

- Previously, when you ran a query that used one or more parameters and did not specify any values, the query retained the parameter values used in the previous execution and returned incorrect records. This issue has been resolved. (TS ID: 168184)

- Previously, beginning with V3.6.0.6.0, date fields on unformatted queries followed the date format defined by user's culture setting or the format defined in the user's Windows Region and Language settings, instead of the YYYY-MM-DD HH:mm:ss format. This issue has been resolved and dates are now once again displayed in the YYYY-MM-DD HH:MM:SS format. (TS ID: 160719)

- Previously, when you exported query results to Excel that had more than 32,676 characters in a field, the error "Query is too complex" was displayed. This issue has been resolved. Now, when you export query result columns having more than 32,676 characters, the message "Data Truncated During Export" is displayed in the affected Excel field. (TS ID: 126010)

- Previously, if a user with the Russian (Russia) Culture setting ran a query returning decimal values, an error occurred. This issue has been resolved. (TS ID: 118790)

- Previously, when you opened a query in the **Open an existing Query** window and sorted the queries by *Created By*, *Created Date*, or *Last Updated By* columns, an error was appeared and the correct data may not have been displayed. (TS ID: 118774)

Asset Safety

Calibration Management

Previously, when you saved a Calibration Task, Inspection Task, or general task record in the Record Explorer pane and specified all families, the system was very slow. This issue has been resolved (TS ID: 113670)

Configuration Manager

Previously, when you viewed feet (FT) and centimeter (CM) conversions in the **Units of Measure** window, the **Destination UCM** field was populated with the incorrect value. This issue has been resolved. (TS ID: 131912)

Documentation

- Previously, in the Installation documentation for V3.5.1.8.0, instructions for upgrading handheld devices was not included. This issue has been resolved and Installation instructions for handheld devices is now included in the V3.5.1.8.0 documentation. (TS ID: 168190)

- Previously, the Meridium APM Software Support Matrix erroneously indicated that Oracle EBS eAM Integration supported Oracle EBS eAM 12.1.3. This issue has been resolved. (TS ID: 171936)

Failure Elimination

Reliability Analytics

Previously, when you ran a System Reliability Analysis, the quantity of the resource may not have been properly calculated, resulting in an incorrect Total Variable Cost. This issue has been resolved. (TS ID: 159824)

PLA

Previously, in PLA, when you added a Production Loss Accounting record to a Production Data record, a rounding error may have occurred. This issue has been resolved. (TS ID: 137994)

RCA

- Previously, when you viewed a Root Cause Analysis and selected Principal Analyst View, the Preserve Item Data Category hyperlinks were not displayed as hyperlinks. This issue has been resolved. (TS ID: 129138)

- Previously, when you viewed an RCA Analysis and selected **Track** from the menu, an error appeared if you clicked the **Tracking** link from a Tracking Item. This issue has been resolved. (TS ID: 129133)

Installation, Upgrade, and System Administration

Database Upgrade

Previously, when you upgraded your database from V3.5.1.7.0 and ran the extraction for any of the SAP Interfaces, an Oracle error (ORA-01722) was displayed. This issue has been resolved. (TS ID: 163077)

Mechanical Integrity

Risk Based Inspection (RBI)

- Previously, when copying an analysis with recommendations in RBI, an error occurred. This issue has been resolved. (TS ID: 168185)

- Previously, in RBI, when you reviewed a Future Risk analysis recommendation, the **Promote to ASM** option was disabled. This issue has been resolved. (TS ID: 168183)

- Previously, when you viewed a printable inspection report, dates appeared in the U.S. culture format regardless of the culture setting for the **Inspection** record(s) or current user. This issue has been resolved.

Now, when a query is executed in *Formatted* mode, dates appear according to the Meridium APM Culture settings for the current user. (TS ID: 156218)

- Previously, in RBI after you selected a Material Grade that had an associated Material Type in the PV Stress family, the **Allowable Stress** field did not populate with the Allowable Stress value. This issue has been resolved. (TS ID: 146074)

- Previously, in the datasheet for Criticality RBI Component - Exchanger Bundle records, in the Operating and Process section, the Toxic Mixture check box in the Channel Side column was incorrectly mapped to the Toxic Mixture Shell check box in RBI Criticality Consequence Evaluation records. This would result in the Toxic Mixture Shell check box being incorrectly selected or cleared. This issue has been resolved.

  To implement these changes, you must either:

- Using the Configuration Manager, re-import the file *07_MI_MPPG_QRY.xm*l located in **C:\Meridium\DbUpg\Versions\3.6.0.9.0\20_IEU\50_Other\2_RecordsLi nks** on the application server. When using this method, existing customization to data mapping may be overwritten.

  -or-

  - In the Meridium APM Framework application, using Record Manager, locate and modify the Data Mapping Query record named *RBI-CNAFC MI_CCRBICTB-MI_CRCOEVAL by Component*. In the **Data Mapping Column-Field Pair** section, in the **Source Query Field** column, make the necessary changes so that Toxic Mixture and Toxic Model in the Source Query Field column correspond to *Toxic Mixture* and *Toxic Fluid*, respectively, in the **Target Field(s)** column. When using this method, any existing customization to data mappings should be preserved.

  (TS ID: 145446)

- Previously, when you created an RBI analysis with a toxic consequence calculation for some toxic gases, and reduced the inventory, if the resulting calculated Evaporation

Rate was between 0 and 1, the consequence category was not calculated correctly. This issue has been resolved. (TS ID: 134923)

- Previously, when you selected **Promote to ASM** for an asset and the **Require a Specific User to be Assigned to a State** check box in the State Configuration Management settings for RBI was checked, an Object Reference Error message was displayed. This issue has been resolved. (TS ID: 134899)

- Previously, when you received an Analysis Calculation error for RBI components having the unit of measure as metric and having a **Fill Height** field value greater than 199, the error simultaneously stated that the calculation had failed and that it had completed successfully. This issue has been resolved. (TS ID: 132611)

Thickness Monitoring

- Previously, when you modified a Thickness Measurement record using the Thickness Measurements datasheet, changes to the record may not have been saved after you clicked the **OK** button on the **Thickness Measurements** window.   This issue has been resolved. (TS ID: 168189)

- Previously, when viewing Thickness Measurement Location (TML) Corrosion Analysis records, negative values in the corrosion analysis fields contained a leading 0. This issue has been resolved. (TS ID: 168188)

- Previously, when you entered text in the long text pop-out window for the **Minimnum Thickness Calculation Comments** field in the TML grid, the text did not get saved. This issue has been resolved. (TS ID: 150026)

- Previously, when you deleted a Thickness Measurement Location (TML) record, the **Next Date** field value of the associated task was not updated and the existing field value was not cleared. This issue has been resolved. (TS ID: 143450)

- Previously, an error appeared when you copied and saved a Thickness Monitoring Location record belonging to a TML group. This issue has been resolved. (TS ID: 143447)

- Previously, in Reliability Analytics, when you used the **Failure Data** window to add data to a newly created analysis, the asset ID you added was not automatically populated in the **Failures** tab. This issue has been resolved. (TS ID: 142890)

- Previously, when you used the TM UI or Framework to create a new TML Group, Analysis and Settings IDs created were not consistent and differed depending on which method was used to create the TML Group. (TS ID: 114128)

Meridium APM Framework

Previously, if you implemented customization in the Meridium Rules Editor (VSTA) on a hyperlink field, the hyperlink was not displayed correctly and did not function as expected in the Record Manager window. (TS ID: 131189)

V3.6.0.10.0

About V3.6.0.10.0

V3.6.0.10.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

- Failure Elimination

Resolved Issues

- APM Foundation

- Asset Safety

- Asset Strategy

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

Enhancements

APM Foundation

mobileAPM

MobileAPM now supports TSL model 1153 RFID Readers. (TS ID: 180229)

Failure Elimination

Generation Management

- In V3.6.0.10.0, enhanced validation and improved warning messages have been added in regards to Primary Capacity Event records that represent an event that spans multiple years.

  Events are now automatically revalidated and any warning messages removed when a corresponding event record for the next year is created.

  In addition, warning messages regarding this scenario now begin with "Year end spanning event conflict" to more easily identify the nature of the error. (TS ID: 181720)

- In V3.6.0.10.0, the Capacity History record Gross Actual Generation (G) and Net Actual Generation (N) fields are now validated to prevent invalid data from being entered. (TS ID: 181718)

Mechanical Integrity

RBI 581

- In Degradation Mechanism Evaluation records for RBI 581, the Number of Highest Effective Inspection field has been converted from a drop-down list box of values to a text box that accepts numeric input. Now, you can enter a value from *1* to *6* in the field, including fractional values, such as *1.375*. Additionally, the Number of Highest Effective Inspection field will now be disabled if the Inspection Effectiveness field is set to *E* or *Not Effective*, as no Inspection credit is given for those levels of effectiveness.

  Because of these changes, the *Calculated Number of Inspections* and *Interpolated Base Damage Factor* fields have been deprecated. (TS ID: 179753, 187757)

- Support for additional Materials and calculating Corrosion Rates related to those materials has been added to several Degradation Mechanisms. The following table lists the Degradation Mechanisms, and the new Materials that are supported.

Degradation Mechanism	Materials
581-High Temperature H2/H2S Corrosion	1.25Cr, 405 SS, 410 SS, 2.25Cr, 2.25Cr-1Mo-V, 316H SS, 5Cr, 7Cr-0.5Mo, 7Cr-1Mo, 9Cr
581-High Temperature Hydrogen Attack	1Cr-0.2Mo, 9Cr
581-High Temperature Sulfuric and Naphthenic Acid	1.25Cr, 405 SS, 410 SS, 2.25Cr, 2.25Cr-1Mo-V, 5Cr, 7Cr, 7Cr-0.5Mo, 9Cr
581-Soil Side Corrosion	5Cr, 7Cr-0.5Mo, 9Cr

  (TS ID: 184195)

Resolved Issues

APM Foundation

Asset Criticality Analysis (ACA)

Previously, the formatting of the numeric value displayed on the **Financial** tab of the Risk Assessment interface included only a decimal place to delineate dollar amounts . Now the format of the value on the **Financial** tab also includes commas as thousands separators. (TS ID: 159994)

Core Analysis

Previously, when you executed the strategy rule **MI_ProcessConditionalAlerts**, the URL displayed in the email contained double backward slashes causing you to receive an error when you clicked the link. This issue has been resolved. (TS ID: 165498)

Dashboard

In V3.6.0.9.0, when you navigated to a dashboard, an error occurred and the dashboard did not load as expected. This issue has been resolved. (TS ID: 181713)

EAM Interfaces - SAP

Previously, when you extracted a Work Order or Work Order with Notification having an Object List from SAP, the Work History records created for the object list items did not have links to the associated Equipment record and Functional Location record. This issue has been resolved. (TS ID: 139771)

mobileAPM

- Previously, in mobileAPM, when you used the scan feature while completing a Route Inspection, you were taken out of the route context, and a listing of all the measurement locations for the asset were displayed on an Inspection page. This issue has been resolved. Now, when you use the scan feature within the route context, the user can select from a list of measurement locations or routes that match the scanned identifier. (TS ID: 185662)

- Previously, when you created a recommendation from the mobileAPM App on an Android device, it was not visible in Meridium APM. This issue has been resolved. (TS ID: 181716)

Policy Manager

Previously, the following issues related to Xi Tag nodes existed:

- When you opened a policy containing an Xi Tag node, an error may have occurred.

- When you created a new policy with a Xi Tag node, the Xi Tag node was not available for selection.

(TS ID: 181711)

SAP Interfaces

- Previously, when attempting to execute a Task List search, searching only for General Task Lists in the Task List Type search criteria, the search returned results for all Task List types. This issue has been resolved. (TS ID: 181736)

- Previously when attempting to execute a Task List Search for an Inspection Task or Calibration Task record, if you searched by the Task Llist Group using a search term consisting of "*" with a combination of other characters, no records were returned. This issue has been resolved. (TS ID: 181721)

Search

Previously, if your Meridium APM Culture Setting was Russian, when you used a custom filter on your search results, the Russian translations for the filter options were incorrect. This issue has been resolved. (TS ID: 132614)

Asset Safety

SIS Management

- Previously, when you generated an SIL Analysis using a site reference associated with a Risk Matrix that did not have a financial risk category, an error may have occurred. This issue has been resolved. (TS ID: 181742)

- Previously, when you generated an SIL Analysis using a site reference associated with a Risk Matrix that did not have a financial risk category and you created a new Instrument Function, an error occurred. This issue has been resolved. (TS ID: 101762)

Asset Strategy

Asset Strategy Management

Previously, if your Meridium APM Culture Setting was Russian, when you viewed the **Unpackaged Actions** tab or the **Packaged Actions** tab on the **Packaging** Page for an Implementation Package record, the Interval Units value was not displayed in Russian. This issue has been resolved. (TS ID: 160328)

Failure Elimination

Generation Management

- Previously, Primary Capacity History Record start values for a unit were incorrectly calculated for back-to-back outage events. This issue has been resolved. Now the calculations used to provide start values for a unit only count attempts to start that are made between back-to-back outage events if there is a gap in time between them. (TS ID: 181740)

- Previously, in Generation Management the **Total Unavailable Hours** value was not calculated correctly. This issue has been resolved. (TS ID: 181734)

PLA

Previously, PLA added an extra day when Daylight Savings Time ended. This issue has been resolved. (TS ID: 181715)

RCA

- Previously, the menu item labels on the **My PROACT** page were displayed in English by default and not localized per your Meridium APM Culture Setting. This issue has been resolved. (TS ID: 164149)

- Previously, when you manually rearranged logic nodes in a Logic Tree, the layout was not saved. This issue has been resolved. (TS ID: 99807)

Installation, Upgrade, and System Administration

Database Comparison Tool

The Database Comparison tool now uses ACE for exporting reports to a Microsoft Excel file. JET is no longer supported. (TS ID: 185062)

Database Upgrade

- Previously, when you added a new field to the Event family, enabled the Spread to Subfamilies checkbox, and upgraded your Meridium APM database, the new field was not spread to subfamilies. This issue has been resolved. (TS ID: 181737)

- Previously, if your database contained a large amount of policy execution history (e.g., 1 million entries), if you deleted a policy instance, the instance was not actually deleted and would reappear when you opened the policy at a later time. This issue has been resolved. Now, when you delete a policy instance, it will be deleted as expected. (TS ID: 181712)

- Previously, when you installed or upgraded the SAP Interfaces module and ran the harmonization report on an Oracle database, errors may have occurred. This issue has been resolved. (TS ID: 174774)

- Previously, when you upgraded your database and the DBUMs processing **run_ddl.sql** encountered an exception, not all fields were processed. This issue has been resolved. (TS ID: 168892)

- Previously, upgrading to Meridium APM versions V3.6.0.7.0, V3.6.0.8.0, and V3.6.0.9.0 required PLA State Management users to run pre- and post post-upgrade scripts as part of the upgrade process. Beginning with V3.6.0.10.0, these scripts are included in the compressed database content folder used by the Meridium APM Database Upgrade Manager. If you are upgrading to V3.6.0.10.0, no manual steps are required for you to implement these PLA features. (TS ID: 161768)

Mechanical Integrity

Inspection Management

- Previously, when you changed the Task Type on the Inspection Task record, the Desired Interval and the Next Due Date values were not preserved. This issue has been resolved. (TS ID: 164974)

- Previously, when you attempted to copy a Full Inspection, General Inspection, or Bundle Inspection record having a completion date prior to 2005, an error occurred. This issue has been resolved. (TS ID: 161218)

- Previously, when you attempted to copy a General or Bundle Inspection record, an error occurred. This issue has been resolved. (TS ID: 161192)

RBI 581

- Previously, the 581-Sigma Phase Embrittlement Degradation Mechanism Evaluation (DME) incorrectly required a value in the Minimum Design Metal Temperature (MDMT) field. This issue has been resolved. This field is now disabled. (TS ID: 187998)

- Previously, the 581-Atmospheric Tank Bottom Degradation Mechanism (DM) incorrectly required that the RBI 581 Risk Analysis record have a value in the Calculated Tmin field. This issue has been resolved. Now, the 581-Atmospheric Tank Bottom DM will no longer prevent an RBI 581 Risk Analysis from being calculated if there is no value in the Calculated Tmin field. (TS ID: 186531)

- Previously, in RBI 581 Risk Analysis records, the Flow Stress field was not correctly calculated if the Tensile Strength and Yield Strength values for a Stress Lookup Table were either empty or *0*.

  For example, if you selected the Pressure Vessels Stress Lookup Table, and if you set the Base Material Construction Code field to *ASME VIII DIV 1*, the Base Material Code Year field to *1998*, the Base Material Spec field to *SA-285*, and the Base Material Grade field to *C*, the Flow Stress field would be set to an unexpectedly large value. This is because the Tensile Strength and Yield Strength do not have values that correspond to those settings.

  This issue has been resolved. Now, if Tensile Strength and Yield Strength values are either *0* or do not exist, the Flow Stress field will be calculated correctly. (TS ID: 180955)

- Previously, when accessing the Inspection History for any Degradation Mechanism Evaluation (DME) record linked to an RBI 581 Risk Analysis, an error message was displayed if your database included Inspections that did not have an associated Degradation Mechanism. This issue has been resolved. Now, when you access the Inspection History for a DME, the list will filter out any Inspections that do not have a corresponding Degradation Mechanism, and no error will appear. (TS ID: 180058)

- Previously, when calculating the Final Damage Factor for a RBI 581 Brittle Fracture Damage Evaluation, if the Furnished Thickness was less than or equal to *0.5*, the Damage Factor Adjustment Service Experience (FSE) field was not correctly set. This issue has been resolved. Now, if the Furnished Thickness is less than or equal to *0.5*, the Damage Factor Adjustment Service Experience (FSE) field will be set to *0.01*. Otherwise, the field is set to *1*. (TS ID: 179075)

- Previously, the value in the Base Damage Factor field in RBI 581 Cracking Damage Evaluation and RBI 581 Environmental Cracking Damage Evaluation records was incorrect after mitigation was performed. This issue has been resolved. Now, the Base Damage Factor field will always be populated with the correct value. (TS ID: 178969)

- Previously, if you added 581-Amine Cracking as a Degradation Mechanism to an RBI 581 Risk Analysis, on the Susceptibility Inputs tab of the 581-Amine Cracking Degradation Mechanism Evaluation datasheet, you could set the Amine Type to *MDEA*. This is not a valid setting for Amine Cracking, and would prevent Susceptibility from being calculated. This issue has been resolved. For Amine Cracking, you can no longer set the Amine Type field to *MDEA*. (TS ID: 177949)

- Previously, Inventory calculations for the Criticality RBI Component - Piping family were based on the Length field. This issue has been resolved. A Calculated Inventory field has been added to the family, and the calculations for Inventory are now based on the Piping Circuit Length field for Criticality RBI Component - Piping records. Additionally, the 581 Consequence Evaluation family has been updated to use the Piping Circuit Length field for Criticality RBI Component - Piping records. (TS ID: 176984)

Thickness Monitoring

- Previously, in V3.6.0.9.0 when you created and saved a new TML Group record, the node representing the new TML Group record was not

displayed in the **TM Explorer** pane. This issue has been resolved. (TS ID: 186137)

- Previously, when you viewed a Thickness Measurement Location record on the **TM Quick View** page, multiple readings that occurred in the same year were not displayed in the correct date order. This issue has been resolved. (TS ID: 167578)

- Previously, when you attempted to delete a TML record that had associated Equipment records, an error occurred. This issue has been resolved. (TS ID: 150028)

V3.6.0.11.0

About V3.6.0.11.0

V3.6.0.11.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- APM Foundation

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You can also view the full APM Connect release notes.

Enhancements

APM Foundation

mobileAPM

- MobileAPM now supports the Getac Z710-Ex tablet and built in HF RFID Reader. (TS ID: 199007)

- MobileAPM now supports the Checkpoint Locked field functionality for Measurement Location records. When viewing any Asset having a locked ML checkpoint, the Asset navigation bar will have a blue lock icon displayed to the left of the Asset ID.

  When the **Scan to Unlock?** checkbox for the ML record is set to *True*, the barcode or RFID tag values stored in the Scan ID field on the same ML record, must be scanned by the user prior to any readings being recorded. After the checkpoint has been scanned and unlocked, the Asset navigation bar will display an unlocked icon ( ). This is only visible while you are viewing or working with that unlocked asset. The asset will be relocked when you navigate away from the asset. (TS ID: 197305)

Operator Rounds

The Route Management page now allows sorting of Route History datasheet readings results. (TS ID: 197310)

Mechanical Integrity

RBI

- Beginning in V3.6.0.11.0, you can generate recommendations and link them to Inspection tasks for the new 581 – Thinning Damage PDM. (TS ID: 204374)

- The following fields have been removed from the RBI 581 Risk Analysis datasheet, and added to the Thinning and Lining Evaluation family:

  The API 653 Maintenance Flag field has been added to the **Thinning Data** section of the RBI 581 Thinning and Lining datasheet.

  The API 653 Maintenance Adjustments field has been added to the **Outputs** section of the RBI 581 Thinning and Lining datasheet.

  (TS ID: 203074)

- Beginning in V3.6.0.11.0, the Material Yield Strength field has been added to the Brittle Fracture DME family. (TS ID: 200426)

- Beginning in V3.6.0.11.0, the Other Damage Mechanism field has been added to the Thinning and Lining DME family. (TS ID: 199204)

- In addition to the information related to fluids used in RBI 580, the RepresentativeFluids reference table now contains information related to fluids used in RBI 581. (TS ID: 190067)

Resolved Issues

APM Foundation

Asset Health Manager (AHM)

- Previously, in AHM, the date format was not displayed according to the user's Meridium APM Culture setting and was not customizable. This issue has been resolved. (TS ID: 202725)

- Previously, when you ran a query containing a union and applied a filter to the result grid, filtered results were not displayed. This issue has been resolved. (TS ID: 199226)

- Previously, an error occurred that prevented you from viewing the Health Indicator details in the **Health Indicator Explorer** pane. This issue has been resolved. (TS ID: 199023)

Core Analysis - Query Builder

Previously, when you selected the **Add Related Families** option from the Query Builder in design view and your Meridium APM Culture setting was set to Russian, related families listed in the **Add Related Family to [<query source>]** window were not localized. This issue has been resolved. (TS ID: 202155)

Lubrication Management

Previously, an error appeared when you opened the Manage Lubricants page. This issue has been resolved. (TS ID: 199241)

mobileAPM

- Previously, when you viewed a Reading record, the Reading Taken Date was not displayed according to the Security User's time zone. This issue has been resolved. (TS ID: 202680)

- The time interval for Inspection Settings is now configurable in mobileAPM. You can now filter the Route list according to a shorter or longer time interval. (TS ID: 202679)

- Previously, when you installed the APM Mobile Framework on a handheld device that has a regional setting other than English, an error occurred and the installation failed. This issue has been resolved. (TS ID: 199501)

- Previously, when you used an Oracle database and downloaded Route records and Measurement Location records to your mobile APM device,

the routes were not downloaded. This issue has been resolved. (TS ID: 197280)

- Previously, when you created or updated a recommendation in mobileAPM that included values that violated field-level rules, the recommendation failed to save. Additionally, a corresponding record was not saved in the Operator Rounds Recommendation In Error family so that the data could be recovered. This issue has now been resolved. (TS ID: 199231)

- Previously, if you had WebDAV enabled in IIS on your Application Server, when you modified a Recommendation in mobileAPM after having previously modified the same Recommendation in mobileAPM, your second set of modifications, and all future modifications, would neither be saved nor appear when opening the Recommendation again. This issue has been resolved. (TS ID: 199228)

- Previously, when using MobileAPM to search for a term that was truncated at the beginning (e.g., searching for 446296 instead of the full Equipment ID 00000000000446296), the correct result would not be returned. This issue has been resolved. Now, you can use the asterisk (*) as the first character of a truncated search term. (TS ID: 199225)

Operator Rounds

Previously, an error occurred when you added a new Reading to a Measurement Location record. This issue has been resolved. (TS ID: 197312)

Security and Accessibility

- Previously, you could grant permissions to a Catalog folder to the same Security Group or Security User multiple times. This issue has been resolved and you are no longer able to grant permissions to a Security Group or Security User if they already have the permissions. (TS ID: 202156, 202158)

- Previously, when you ran the LDAP synchronization process after unlocking an Active Directory User account, the Meridium APM Security

User status remained in an inactive status. This issue has been resolved. (TS ID: 199518)

- Previously, when you logged into Meridium APM using the <Shift> key to force a manual login, you were able to log in without providing a password. This issue has been resolved. Now, you can only use this manual login feature without providing a password if your Security User account does not have a password. (TS ID: 193922)

Asset Safety

Calibration Management

Previously, when you tried to connect in a Citrix environment to a device for automated calibrations (e.g., a Fluke device), the connection to the device timed out and caused an error. This issue has been resolved. Now, the DeviceTimeout setting for all devices is set for a significantly longer period of time, and you can modify the DeviceTimeout setting in the **Meridium.exe.config** file as needed. (TS ID: 203318)

SIS Management

- Previously, if you tried to unlink the only Sensor linked to a Sensor Group or to unlink the only Final Element linked to a Final Element Group in a Protective Instrument Loop diagram, an error occurred. This issue has been resolved. Now, when you try to unlink one of these elements, a message appears stating that you cannot unlink the only linked Sensor or Final Element. (TS ID: 203315)

- Previously, when you opened or created a Protective Instrument Loop, the name of the Final Element Group did not appear in the Explorer pane or in the Diagram Canvas on the Protective Instrument Loop Diagram View page. This issue has been resolved. (TS ID: 203310)

- Previously, when you opened a corrupt protective loop an error occurred. This issue has been resolved. (TS ID: 202171)

- Previously, when you created a new protective loop and clicked on Functions prior to saving it, an error occurred. This issue has been resolved (TS ID: 199503)

- Previously, in Asset Safety the SIS Management module did not handle the IEC 61511 architecture properly. This issue has been resolved. (TS ID: 199495)

- Previously, the MI SIS user could not create a SIS Proof test. This issue has been resolved. (TS ID: 199245)

Asset Strategy

ASI for SAP

- Previously, when you deleted an operation having a child maintenance package or material record in ASI after having implemented it in SAP, an "Operation not found" error was displayed when the implementation package updates were sent to SAP. This issue has been resolved. (TS ID: 199001)

- Previously, when you revised an implementation package in ASI after having implemented it in SAP, and you moved an operation from one task list to another by dragging and dropping the operation, it was not moved in SAP when the implementation package updates were sent. To prevent this, drag and drop has been disabled for operations that have already been implemented in SAP. Now, you should copy and paste the operation using the right-click menu in ASI, then delete the original in order to move an operation that has already been implemented in SAP. (TS ID: 198978)

Asset Strategy Management

- When you created an Asset Strategy using a Site Reference record linked to a Risk Matrix that did not have a Financial Risk Category, an error was displayed when you attempted to access the linked System or Unit Strategy. This issue has been resolved. (TS ID: 202160, 202161, 202163, 202164)

- Previously, the Interval Units column in Asset Strategy Actions Details query under Catalog/Public/Meridium/Modules/Asset Strategy Management/Management/Queries was not localized. This issue has been resolved. (TS ID: 199246)

Documentation

Meridium APM Help contains updated information on the use of the Meridium APM Database Comparison Tool for Oracle users. (TS ID: 199020)

Failure Elimination

Metrics and Scorecards

Previously, when you attempted to delete an Analysis Server from the Add Cube builder, you were unable to delete it and the error message "This server cannot be deleted because it is used by other cubes" was displayed. This issue has been resolved. (TS ID: 197309, 203457)

PLA

- Previously, when you changed the date range on a Production Plan to decrease the duration, the number of records returned did not decrease to reflect the shorter duration. This issue has been resolved. (TS ID: 202141)

- Previously, when you created a Production Data record and followed the Period hyperlink, the date displayed on the Production Data datasheet did not match the date displayed on the Production Data grid. This issue has been resolved. (TS ID: 202140)

- Previously, the date format was incorrect when creating a Time-Based Production Plan and Quantity-based Plan in Production Loss Analysis. This issue has been resolved. (TS ID: 199032)

RCA

Previously, when you attached a reference document to an RCA Analysis, if the attachment was a JPEG file having the .JPG file extension in capital letters, it did not appear in the list of available documents. This issue has been resolved. (TS ID: 202149)

Reliability Analytics

- Previously, the Spares Analysis results could not be exported in the Russian language. This issue has been resolved. (TS ID: 199227)

- Previously, headers in Spares Analysis reports could not be localized. This issue has been resolved. (TS ID: 199025)

Mechanical Integrity

RBI 581

- Previously, the generation of recommendations failed because of a few invalid mapping records in the RBI Strategy Mapping Configuration. This issue has been resolved. The mappings between the following Degradation Mechanisms and Policies have been removed from the RBI Strategy Mapping Configuration:

Degradation Mechanism	Policy
581-Ferritic Component Corrosion Under Insulation	RBI 581 Tank Bottom Insp Recommendation
581-Atmospheric Tank Bottom Corrosion	RBI 581 Tank Shell Int Corrosion Recommendation
581-Internal Component Lining Damage	RBI 581 Tank Bottom Insp Recommendation
581-Atmospheric Tank Bottom Corrosion	RBI 581 Thinning and Lining Insp Recommendation
581-Cooling Water Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature Sulfidic and Naphthenic Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature H2/H2S Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Ferritic Component Atmospheric Corrosion	RBI 581 Tank Bottom Insp Recommendation

Degradation Mechanism	Policy
581-Austenitic Component Atmospheric Cracking	RBI 581 Tank Bottom Insp Recommendation
581-Hydrochloric Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Sulfuric Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Alkaline Sour Water Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature Oxidation	RBI 581 Tank Bottom Insp Recommendation
581-Soil Side Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Amine Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Acid Sour Water Corrosion	RBI 581 Tank Shell Int Corrosion Recommendation
581-Austenitic Component Cracking Under Insulation	RBI 581 Tank Bottom Insp Recommendation
581-Hydrofluoric Acid Corrosion	BI 581 Tank Bottom Insp Recommendation
581-Acid Sour Water Corrosion	RBI 581 Tank Bottom Insp Recommendation

(TS ID: 190340)

- Previously, in the **Degradation Mechanism Evaluations** section of a PRD Analysis, you could not access the previous inspections for Over Pressure or Leak Degradation Mechanism Evaluations (Degradation Mechanism Evaluations for Pressure Relief Devices). This issue has been resolved. (TS ID: 190388)

- Previously, in Oracle databases, when a RBI 581 Analysis including *581-High Temperature H2/H2S Corrosion* damage mechanism had *Calculated Rate* selected in the Selected Base Material Corrosion Rate field, the corrosion rate value was not calculated. This issue has been resolved. (TS ID: 196775)

- Previously, some of the 300 Series Stainless Steel Materials and 6Cr Low Alloy Base and Cladding Materials were not supported for the 581-High Temperature Sulfuric and Naphthenic Acid. This issue has been resolved. (TS ID: 196990)

- Previously, the Calculated Tmin field was incorrectly set up as a required field, which caused validation to fail when calculating an analysis for Atmospheric Tank Bottom Corrosion. This issue has been resolved. Now, the Calculated Tmin field is calculated as expected, without being overwritten with the Specified Tmin value. (TS ID: 197039)

- Previously, in the RBI 581 Risk Analysis record, if you selected a value in the Toxic Model field, sometimes, the value in the Weighted Toxic Consequence Area field was not considered while calculating lower Release Durations. This issue has been resolved. (TS ID: 197327)

- Previously, when you attempted to import Column Field Pair records from the manual imports folder, sometimes, an error message appeared due to duplicate records. This issue has been resolved. (TS ID: 197829)

- Previously, for Brittle Fracture and Low Embrittlement, the Base Damage Factor was calculated incorrectly because a value greater than four inches was not considered for Furnished Thickness. This issue has been resolved. (TS ID: 198861)

- Previously, for HIC/SOHIC-HF and HIC/SOHIC-HSC Cracking Damage Mechanisms, the value in the Final Damage Factor field was incorrect. This issue has been resolved by modifying the Final Thinning Damage Factor (Cracking without Online Monitoring) RScript. (TS ID: 200166)

- Previously, in RBI 581, the UOM for the Chloride Concentration field did not match the UOM in the Corrosion Rate Reference table for HCl Corrosion. This issue has been resolved. Now, the UOM for Chloride Concentration and HCl Corrosion Rate are both set to PPM. (TS ID: 200412)

- Previously, in Oracle databases, an error occurred when calculating the Probability of Failure for an RBI Analysis due to mismatched Catalog Rscript ID. This issue has been resolved. (TS ID: 200693)

- Previously, in Oracle databases, the **Manage RBI Recommendations** link on the **RBI Start** page did not work. This issue has been resolved. (TS ID: 201082)

- Previously, in a Criticality Calculator External Corrosion record, when you clicked **Average** in the Selected Corrosion Rate field, the value in the Estimated Wall Loss field was calculated as 0. This issue has been resolved. The Average option in the Selected Corrosion Rate field has been replaced with Short Term Average and Long Term Average options. The fields Short Term Average and Long Term Average have been added to the Criticality Calculator External Corrosion family datasheet. Now, depending upon which option you select, Wall Loss will calculate for either the Short Term Average Corrosion Rate or the Long Term Average Corrosion Rate. (TS ID: 202159)

- Previously, when you created an RBI Analysis at the component level, an error may have occurred. This issue has been resolved. (TS ID: 202138)

- Previously, in RBI 581, the Risk Summary ID and Risk Summary Description field values appeared incorrectly on the Analysis datasheet for Liner, Brittle, HTHA, and Mechanical Fatigue damage mechanisms. This issue has been resolved. (TS ID: 202259)

- Previously, to calculate the Total Damage Factor in Inspection Planning, Meridium APM did not consider the Degradation Mechanisms that did not mitigate the risk. This issue has been resolved. In an RBI 581 Risk Analysis record, in the **With Plan** tab, the value in the Total Damage Factor With Plan field is calculated by considering *all* the Degradation Mechanisms in the analysis. Also, fields to display the Governing Damage Factor for Degradation Mechanisms that did not mitigate the risk have been added in the **With Plan** tab. (TS ID: 203590)

- Previously, in Oracle databases, an error occurred when calculating the Damage Factor for the 581-885F Embrittlement and 581-Sigma Phase Embrittlement Degradation Mechanisms because of a space at the end of the policy name. This issue has been resolved. (TS ID: 203746)

- Previously, if you linked an RBI 581 Risk Analysis to a Damage Mechanism that is *invalid* for the component type of the analysis, and then tried to calculate the analysis, there was no message to specify that the Damage Mechanism was invalid for the selected component type. This issue has been resolved. If you try to link an analysis to a Damage Mechanism that is invalid for the selected component type, an error message appears, stating that the Damage Mechanism is invalid. You will not be able to calculate the analysis. The following table provides a list of Damage Mechanisms that you can link to an analysis based on the value in the Component Type field.

If the value in the Component Type field is…	…You must link the following Damage Mechanisms to the analysis
Storage Tank Bottom	• 581 Atmospheric Tank Bottom Corrosion • 581-Internal Component Lining • All Damage Mechanisms related to RBI 581 Cracking Damage Evaluation
Any value other than Storage Tank Bottom	All Damage Mechanisms related to the following Degradation Mechanism Evaluations: • RBI 581 Mechanical Fatigue Damage Evaluation (only for *Pipe* component type) • RBI 581 Brittle Fracture Damage Evaluation • RBI 581 Thinning and Lining Evaluation (except 581-Atmospheric Tank Bottom Corrosion) • RBI 581 External Cracking Damage Evaluation • RBI 581 External Damage Evaluation • RBI 581 HTHA Damage Evaluation • RBI 581 Cracking Damage Evaluation

(TS ID: 206473)

- Previously, the Date In Service field in the 581-Austenitic Component Atmospheric Cracking and 581-Austenitic Component Cracking Under Insulation records was not validated to calculate the Age and Damage Factor. This issue has been resolved. The Date In Service field is now a required field. (TS ID: 206765)

- Previously, the DF values of the 581-High Temperature Hydrogen Attack, 581-Brittle Fracture, and 581-Piping Mechanical Fatigue Degradation Mechanisms were not considered while calculating the values in the Total Damage Factor Without Plan and Total Damage Factor With Plan fields in the associated RBI 581 Risk Analysis record. Also, these values were not populated in the corresponding fields in the *individual* Degradation Mechanism datasheets. This issue has been resolved. (TS ID: 207404)

- Previously, when you logged in to Meridium APM as a metric user, the inventory, corrosion rate, flow stress, and Tmin (for AST) calculations were incorrect. This issue has been resolved. (TS ID: 207678)

Thickness Monitoring

- Previously, when you generated an asset analysis and selected the **Least Squares** check box on the **Asset Analysis Settings** window, the corrosion rate was not displayed correctly in the TML Analysis plot. This issue has been resolved. (TS ID: 199506)

- Previously, when you added a new TML record having a Remaining Life value of zero or less to a Corrosion Analysis Summary and saved the analysis, an error may have occurred. This issue has been resolved. (TS ID: 199022)

- Previously, when you created an Inspection record in a family whose caption contains the word Checklist, the record was not linked to the Functional Location family. This issue has been resolved. (TS ID: 197300)

- Previously, when you deleted TML records from the **TM TMLs/Measurement** page, the record was deleted, however, an object reference error was displayed. This issue has been resolved. (TS ID: 197287)

- Previously, you were not able to add multiple readings through the TM Measurement Data Entry Page or the Measurement Data Entry URL. This issue has been resolved. (TS ID: 197283)

V3.6.0.12.0

About V3.6.0.12.0

V3.6.0.12.0 contains enhancements and resolved issues in the following Meridium APM applications or Work Processes.

Enhancements

- Mechanical Integrity

Resolved Issues

- APM Foundation

- Asset Safety

- Asset Strategy

- Failure Elimination

- Installation, Upgrade, and System Administration

- Mechanical Integrity

You can also view the full APM Connect release notes.

Enhancements

APM Foundation

MobileAPM

- The Panasonic ToughPad FZ-M1 with optional external UHF RFID reader is now supported in MobileAPM. Barcode scanning functionality via the built-in camera is also supported. (TS ID: 207661)

- Now, in MobileAPM, the **Action Taken** drop down list has been added to the **Reading** record for Measurement Locations to store the actions taken by the MobileAPM user. The Comments Entry screen has been renamed to Comments and Actions. The values that appear in the Actions Taken drop down list can be configured by adding the desired values to the Action field located on the Limit Values tab of the Measurement Location Task View datasheet on the Route Management page. (TS ID: 202281)

- MobileAPM now displays the Route due date on the Inspection screen. The "Due After" date displayed will reflect the earliest scheduled date for all active Measurement Location records linked to the Route or for the Route itself. If neither are due, "Not Due" will be displayed along with the next anticipated due date. If the active Route is considered due, but does not have any active measurement locations, the message "Schedule not defined or All measurement locations are inactive" is displayed. (TS ID: 193643)

- MobileAPM is now compatible with Windows 8.1. (TS ID: 206230)

- MobileAPM now supports the Microsoft Surface Pro 3 with Windows 8.1. (TS ID: 206230)

Mechanical Integrity

RBI

- For a component other than a storage tank or a heat exchanger bundle, when you generate an RBI Recommendation record for a Criticality Ext. Corr. Deg. Mech. Eval. record that is linked to a Criticality RBI Analysis record, the Interval field in the RBI Recommendation record is populated with the value in the Estimated Half Life field in the Criticality Ext. Corr. Deg. Mech. Eval. record. This happens only if the **Use Calculated Data** check box in the associated Inspection Strategy record is selected. (TS ID: 235193)

- To calculate the corrosion rate for a damage mechanism related to RBI 581 Thinning and Lining Damage Evaluation, the most conservative values are considered. (TS ID: 230796)

- If you want only RBI Criticality Analyses or only RBI 581 Risk Analyses to be created, if you are a member of the RBI Administrator Security Group, you can now set the preference on the **Administrative Tasks** page. A new drop-down list box labeled **RBI Methodology Preference** has been added to the **Administrative Tasks** page, which allows you to select *RBI 580*, *RBI 581*, or *RBI 580 and 581*, based on the license that you have applied. (TS ID: 228770)

- In RBI 581, in addition to calculating the Inventory Component Mass value, Meridium APM now calculates the Inventory Group Mass value for a group of components. To facilitate this calculation, if you are a member of the RBI Administrator Security Group, you can create

inventory groups and link components to a group using the administrative settings in RBI. (TS ID: 213962)

Resolved Issues

APM Foundation

Asset Criticality Analysis (ACA)

- Previously, when you viewed Asset Criticality Analysis System records in the Asset Criticality Analysis Systems grid you were unable to sort by the System ID column in order to display the records alphabetically. This issue has been resolved. (TS ID: 209640)

- Previously, there was a delay accessing ACA systems in Asset Criticality Analysis. This issue has been resolved. (TS ID: 199034)

Asset Health Manager (AHM)

- Previously, when you acknowledged a Self Mapped Asset Health Indicator record as a One Time Acknowledgment, the acknowledgment was immediately cleared. This issue has been resolved. (TS ID: 230319)

- Previously, in V3.6.0.9.0 or later, the Process Data Integration Service could fail to process some of the OPC Tag records if the total number of records was greater than 1000. This issue has been resolved. (TS ID: 216804)

Asset Hierarchy Tool (AHT)

Previously, when you created or modified mappings and saved it, an error may have occurred and "Error in saving the AHT Mappings. A task was cancelled" was displayed. This issue has been resolved. (TS ID: 234616)

Configuration Tools

Previously, you could not create Relationship Definitions by adding a new family as a successor for a new or existing relationship. This issue has been resolved. (TS ID: 209677)

Dashboards

- Previously, when you logged on to Meridium APM Framework and opened a dashboard, an error may have occurred intermittently. This issue has been resolved. (TS ID: 230330)

- Previously, when you used a dashboard query having more than one filter or having filters allowing multiple values to be selected, the incorrect results may have been displayed or the results may not have displayed correctly. These issues have been resolved. (TS ID: 230329)

- Previously, when you printed a KPI from the **View KPI** page by selecting **Print KPI** from the Common Tasks menu, right clicking on the Historical KPI Measurements graph and selecting Print, or by selecting Print from the File menu at the top of the window, nothing happened. This issue has been resolved and printing now occurs as expected. (TS ID: 230322)

EAM Interfaces

- Previously, confirmations were not created for tasks that had revisions. This issue has been resolved. (TS ID: 222152)

- Previously, when creating confirmations for task and event records, an error occurred stating the value was either too large or too small. This issue has been resolved. (TS ID: 221968)

- Previously, you could not create an SAP Notification in RBI using the Create WMI option. This issue has been resolved. (TS ID: 209700)

- Previously, an object reference error would occur when creating confirmations using the Work Management Interface after saving an Inspection record. This issue has been resolved. (TS ID: 209679)

- Previously, Technical Characteristic family fields containing decimal values may not have displayed correctly.

- Incorrectly formatted or missing decimal place values may have been displayed.

- Trailing zeroes may not have been displayed for decimal values.

- Leading zeroes for numeric values may have been displayed.

This issue has been resolved. (TS ID: 209646)

mobileAPM

- Previously, when you created a new Route record and Measurement Location records in Meridium APM Framework, the Route record was not visible in mobileAPM and could not be subscribed to from a mobile device. This issue has been resolved. (TS ID: 237474)

- Previously, while executing a route in the disconnected state, and after closing the view of multiple RFID or Barcode scan results, the route execution menu bar may have disappeared. This issue has been resolved. (TS ID: 230334)

- Previously, when using MobileAPM on an Arbor Gladius tablet or other mobile phone or device having a small screen, the collapsed navigation tab labels were not displayed. This issue has been resolved. (TS ID: 230331)

- Previously, in MobileAPM, you were unable to enter negative values while entering numeric readings using a tablet. This issue has been resolved. (TS ID: 209714)

- Previously, when you successfully downloaded a route in mobileAPM, an error message was written to the Meridium Application Event log. This issue has been resolved and the error "Assembly (Meridium.AHTUpdateFilter) not loaded" no longer appears in the Meridium Application Event log when a route is successfully downloaded. (TS ID: 209634)

- Previously, when you used mobileAPM on an Android or Apple device, two navigation bars may have been displayed when viewing routes. This issue has been resolved. (TS ID: 207677)

Operator Rounds

- Previously, when you installed the RFID module on a handheld device in V3.6.0.11.0 an error occurred. This issue has been resolved. (TS ID: 244111)

- Previously, when you updated a Measurement Location from the **Operator Rounds Template Management** page, a syntax error occurred. This issue has been resolved. (TS ID: 225951)

- Previously, compliance tracking did not work as expected with UTC dates and when used with the Meridium APM Scheduler Manager application. Not all readings were captured and the error "Non-Compliance scheduler encountered an error - ORA-00001: unique constraint (%s.%s) violated" was posted in the event viewer. This issue has been resolved. (TS ID: 224578)

- Previously, when you synced a handheld device and experienced a network connectivity issue, an error may have occurred. The error "Sync Failed – Reason: Last synced anchor <TABLE NAME> is not stored in the DB, Request cannot be completed" was displayed and the device did not sync as expected. This issue has been resolved. (TS ID: 216814, 216798)

- Previously, when you updated a Measurement Location record from a template in an Oracle environment an error occurred and displayed the message "ORA-01795: maximum number of expressions in a list is 1000." This issue has been resolved. (TS ID: 209740)

Policy Manager

Previously, Policies using a query with an identical column name from two or more families did not properly reference these columns from the appropriate families. This issue has been resolved. (TS ID: 210029)

Process Data Integration

Previously, multiple readings occurring milliseconds apart created the appearance of duplicate readings being created for XI tags. This issue has been resolved. Readings occurring within 1 second of the last recorded reading are now ignored. (TS ID: 233240)

Queries

Previously, in the formatted mode, a query with three or more levels of abstraction did not execute correctly and returned to the design view. This issue has been resolved. (TS ID: 209732)

Asset Safety

Calibration Management

- Previously, the Certification Status field on a Test Equipment record was not updated to display Out of Cert when the specified Next Certification date was passed. This issue has been resolved. (TS ID: 230316)

- Previously, an error would occur viewing Calibrations after a Calibration Template was deleted. This issue has been resolved. (TS ID: 209697)

SIS Management

- Previously, when you created a Protective Instrument Loop (PIL) from a SIL Analysis and navigated to a different screen without saving the PIL when prompted, an error may have occurred when you accessed the Grid View. This issue has been resolved. (TS ID: 230306)

- Previously, SIS Trip Reports could not be deleted. This issue has been resolved. (TS ID: 209735)

- Previously, when you viewed a Proof Test report, the Step Sequence Numbers appeared out of numerical order. This issue has been resolved. (TS ID: 209695)

- Previously, when you viewed reference documents on the Reference Documents Page, the Description field value was displayed as a hyperlink. This issue has been resolved. (TS ID: 209694)

- Previously, existing Protective Instrument Loops originating from an imported exida™ project could no longer be opened. This issue has been resolved through a specific exida™ exSILentia version requirement, addition of the Protective Loop Utility, and changes to PIL family fields.

    - V3.6.0.12.0 requires exida™ exSILentia version 3.0.5.3. Use of exSILentia version 3.0.5.1 is no longer supported.

    - The Protective Loop Utility tool has been created and included in the Meridium APM Database Upgrade Manager application. Existing Protective Instrument Loops will be upgraded and compatible with exSILentia version 3.0.5.3.

- The PVST Interval, PVST Interval UOM, and Custom PVST Coverage fields have been removed from the Protective Instrument Loop Final Element family.

- This release introduces new fields to the Protective Instrument Loop, Protective Instrument Loop Group, and Protective Instrument Loop Logic Solver families. Three new options have been added to the Protective Instrument Loop family field Test Architecture Constraint. The field family changes are shown below.

Protective Instrument Loop Family Field	Data Type	Usage	Behavior
Application Test Method	Character	The method used for application test	Drop down with two options IEC 61508:2000 IEC 61508:2010
Test Architecture Constraints	Character	A value that indicates the level of safety certification that is associated with the elements in the protective instrument loop.	This field appears as a list labeled **Test Architecture Constraints** and contains the following options: **IEC 61508:** Indicates that the elements in the protective instrument loop have been certified according to the IEC 61508 standard. **IEC 61508 : 2000:** IEC 61508 : 2000 tables [per 61511-1 11.4.5] **IEC 61508 : 2010:** IEC 61508 : 2010 tables [per 61511-1

Protective Instrument Loop Family Field	Data Type	Usage	Behavior
			11.4.5] **IEC 61511:** Indicates that the elements in the protective instrument loop have been certified according to the IEC 61511 standard. **IEC 61511 ignore:** IEC 61511 [ignore 11.4.3 for Type A devices] **Not Consider:** Indicates that the architectural constraints will not be considered in the SIL calculation.

Protective Instrument Loop Group Family Field	Data Type	Usage	Behavior
ATI / PVST Automatic/Manual	Character	ATI / PVST Automatic/Manual	
ATI / PVST Interval UOM	Character	ATI / PVST Interval UOM	
ATI / PVST Interval	Number	ATI / PVST Interval	Holds the ATI Interval in case of Sensor Group and PVST Interval in case

Protective Instrument Loop Family Field	Data Type	Usage	Behavior
			of Final Element Group
ATI / PVST Coverage	Number	ATI / PVST Coverage	
ATI / PVST Enabled	Logical	ATI / PVST Enabled	
Protective Instrument Loop Logic Solver Family Field	Data Type	Usage	Behavior
App Diagnostic Test	Logical	Application Level Diagnostic Test	
Automatic Prooftest Switchover Converage	Number	Automatic Prooftest Switchover Converage	
Automatic Prooftest Switchover Interval	Number	Automatic Prooftest Switchover Interval	
Automatic Prooftest Switchover	Logical	Automatic Prooftest Switchover	Indicates that this logic solver executes automated proof tests.
Automatic Channel Count	Logical	Automatic Channel Count	When checked the application will determine the channel count for logic solver channels based on
Diagnostic Test Automatic / Manual	Character		
Diagnostic Test Interval UOM	Character		

Protective Instrument Loop Family Field	Data Type	Usage	Behavior
Diagnostic Test Coverage	Number	Application Level Diagnostic Test Coverage	
Diagnostic Test Interval	Number	Application Level Diagnostic Test Interval	

(TS ID: 210437)

Asset Strategy

Asset Strategy Implementation (ASI)

Previously, an error may have occurred when opening an existing Implementation Package in ASI. This issue has been resolved. (TS ID: 230287)

Asset Strategy Management (ASM)

Previously, when viewing an ASI Package, Implementation Roles were not displayed in the ASI Tree View. This issue has been resolved. (TS ID: 230321)

Reliability Centered Maintenance (RCM)

- The Evaluation List Query in the Catalog under Public\Meridium\Modules\RCM\ and Baseline\Meridium\Modules\RCM\ is no longer used in Meridium APM and has been marked as deprecated. (TS ID: 209736)

- Previously, when you viewed a RCM or FMEA Recommendations report, duplicate recommendations were displayed on the report. This issue has been resolved. (TS ID: 209637)

Failure Elimination

Generation Management

Previously, when you created a Primary Capacity Incident Record for a Reserve Shutdown (RS) Outage Event, the Gross Available Capacity and Net Available Capacity fields were populated with non-zero values. This issue has been resolved. (TS ID: 215338)

Production Loss Accounting (PLA)

- Previously, when two users simultaneously edited a production data entry record in PLA, the error message "Entity updated by another user" was displayed. This issue has been resolved. (TS ID: 230326)

- Previously, when you used the Process Data Integration (PDI) feature with PLA, Production Plan records did not update as expected. This issue has been resolved. (TS ID: 230309)

- Previously, when you used PI tags to populate Production Data records for a Time-Based Production plan, readings began and ended on the designated times, however they did not resume at the specified Start Time unless the Production Data screen was opened in the user interface. This issue has been resolved. (TS ID: 206758)

Reliability Analytics

Previously, when your Meridium Application User Culture settings was set to Russian and you viewed the Spares Analysis Page, translated form elements did not display correctly. This issue has been resolved. (TS ID: 209712)

Installation, Upgrade, and System Administration

Database Upgrade

- Previously, when you updated your Meridium APM database using the Meridium APM Database Upgrade Manager application, the Signature Import may have failed and displayed the message "Bulk copy operation timed out". This issue has been resolved and now, if this error and message is encountered, you can set the value of the BulkCopyTimeout in the SignDatabase.exe.config file. The default value for the BulkCopyTimeout is 300 seconds. (TS ID: 216811)

- Previously, The unit key for Production plans with detailed long range plans did not upgrade correctly. This issue has been resolved. (TS ID: 204120)

Mechanical Integrity

Inspection Management

- Previously, an error occurred when selecting the Generate All Inspections link on the Manage Work Packs page. This issue has been resolved. (TS ID: 209734)

- Previously, when you viewed an inspection report and your Meridium APM Culture setting was French or Portuguese, some elements may have been displayed in English. This issue has been resolved. (TS ID: 209656)

Mechanical Integrity Dashboard

- Previously, when you viewed the Mechanical Integrity dashboard in Internet Explorer 11, the graph displayed in the General Measures window did not display the line representing the measurement value. This issue has been resolved and the Mechanical Integrity dashboard is displayed as expected in any supported browser. (TS ID: 230337)

RBI

- Previously, an error occurred when trying to import RBI data using Export and Import RBI data link in APM. This issue has been resolved.(TS ID: 210662)

- Previously, when you copied an RBI Criticality Analysis record with RBI Recommendation and Qualitative Degradation Mechanisms, the values of the fields in the associated Degradation Mechanism Evaluation records were *not* copied to the corresponding fields in the new Degradation Mechanism Evaluation records. This issue has been resolved. (TS ID: 211323)

- Previously, when you exported RBI data, the Export Status window remained at 0% and the data was not exported. This issue has been resolved. (TS ID: 220977)

- Previously, if you applied Meridium APM V3.6.0.11.0 or later, the Component Damage Flammable and Personal Injury Flammable CE Constants families incorrectly updated the property constants of the following representative fluids: C1, C3, C6, and C9. Because of this, the Consequence of Failure calculations were incorrect if you selected any of the aforementioned fluids. This issue has been resolved. (TS ID: 221625)

- Previously, the equipment and functional location data was not automatically populated in the Work Management Item (WMI) Builder when creating an SAP notification from the Create WMI link of an RBI recommendation. This issue has been resolved. (TS ID: 221770)

- Previously, an error would occur stating the functional location name is not valid when adding equipment or a functional location in the Work Management Item builder from an RBI Recommendation when the equipment or functional location was valid in SAP. This issue has been resolved. (TS ID: 221793)

- Previously, on the **Recommendation Management** page, no Inspection Tasks were displayed for the Asset. Because of this, you could not link an RBI Recommendation to an Inspection Task. This issue has been resolved. (TS ID: 229645)

- Previously, when you copied an RBI Analysis having an associated RBI Recommendation record, the analysis heading displayed the incorrect date and the Probability Category and Probability of Failure fields were not populated for qualitative PDMs. This issue has been resolved. (TS ID: 230189)

- Previously, if the value in the Consequence Category-Rolled Up field in an RBI Criticality Analysis record was *E*, then the value in the Structural Minimum Thickness field in an associated Criticality Int. Corr. Deg. Mech. Eval. record was *0*, instead of *0.03*. This issue has been resolved.(TS ID: 231241)

- Previously, for a Tank Shell component, the value in the Estimated Minimum Thickness field on a Criticality Int. Corr. Deg. Mech. Eval. datasheet was incorrect. Instead of considering the *maximum* value among the calculated minimum thickness and the value in the Structural Minimum Thickness field, the calculated minimum thickness value was used to populate the Estimated Minimum Thickness field. This issue has been resolved. (TS ID: 232508)

- Previously, for a component of type *Storage Tank Bottom*, in the **Production Loss Consequence** section of a Criticality Calculator Consequence record, the value in the Lost Production Category field was *not* used to calculate the value in the Consequence Category-Rolled Up field in an RBI Criticality Analysis record. Because of this, the value in the Structural Minimum Thickness field in an associated Criticality Int. Corr. Deg. Mech. Eval. record was calculated incorrectly. This issue has been resolved. (TS ID: 232510)

- Previously, the value in the Estimated Half Life field on a Criticality Ext. Corr. Deg. Mech. Eval datasheet was calculated incorrectly. This issue has been resolved. (TS ID: 232660)

RBI 581

- Previously, if the values in the Liner Present and the Online Monitoring Flag fields on an RBI 581 Thinning and Lining Damage Evaluation datasheet were *Yes*, then the Key Process Variable?, Electrical Resistance Probes?, and Corrosion Coupons? fields were *not* enabled. This issue has been resolved. Now, irrespective of the value in the Liner Present field, the Key Process Variable?, Electrical Resistance Probes?, and Corrosion Coupons? fields are enabled if the value in the Online Monitoring Flag field is *Yes*. (TS ID: 218242)

- Previously, in an RBI 581 Risk Analysis, the values in the fields related to governing damage factors were calculated from the damage mechanisms that were *not* governing among all the damage mechanisms linked to a DME. This issue has been resolved. Now, the values in the fields related to governing damage factors are calculated only from governing damage mechanisms. (TS ID: 219459)

- Previously, if you linked an RBI 581 Risk Analysis to the 581-Sulfuric Acid Corrosion damage mechanism without having entered a value in the Fluid Velocity field in the analysis, then no validation message appeared when you calculated the analysis. This issue has been resolved. (TS ID: 219639)

- Previously, on an RBI 581 Consequence Evaluation datasheet, if you selected the **Use Calculated Inventory** check box, and had not entered values in any of the fields on the RBI Component datasheet that were used to calculate the value in the Inventory Component Mass field, then

no validation message appeared when you calculated the associated analysis. This issue has been resolved. (TS ID: 220144)

- Previously, the Degradation Mechanism, 581-High Temperature Sulfidic and Naphthenic Acid, was incorrectly labeled as 581-High Temperature Sulfuric and Naphthenic Acid. This issue has been resolved. Now, the following changes have been made:

  - All instances of *581-High Temperature Sulfuric and Naphthenic Acid* in the UI are replaced with *581-High Temperature Sulfidic and Naphthenic Acid*.

  - In the MI_DEGRADATION_MECHANISM_TYPES System Code Table, the System Code ID *581-High Temperature Sulfuric and Naphthenic Acid* is set to *Inactive*. A new System Code ID, *581-High Temperature Sulfidic and Naphthenic Acid*, is added and set to *Active*.

  - For each baseline record in the following families, if the value in any of the following fields is *581-High Temperature Sulfuric and Naphthenic Acid*, then it is replaced with *581-High Temperature Sulfidic Acid and Naphthenic Acid*.

Family	Field
Materials for Degradation Mechanisms	Degradation Mechanism
Potential Degradation Mechanisms	Degradation Mechanism Description
RBI Strategy Mapping Configuration	Degradation Mechanism
Degradation Mechanisms	Degradation Mechanism **Note:** Additionally, the value in the Deg Mech Comments field is changed to 581-High Temperature Sulfidic Acid and Naphthenic Acid.
RBI Degradation Mechanism	Damage Mechanism **Note:** Additionally, the value in the Degradation Mechanism Description field is changed to 581-

Family	Field
Evaluation	<mark>High Temperature Sulfidic Acid and Naphthenic Acid.</mark>

(TS ID: 221465)

- Previously, in the **Online Monitoring Flag** box in the **General** section of an RBI 581 Cracking Damage Evaluation or an RBI 581 Thinning and Lining Damage Evaluation datasheet, if you selected *No (N)*, the value in the Online Monitoring Adjustment field in the **Outputs** section was blank, instead of *1*. Because of this, the Damage Factor and SHE risks were calculated incorrectly. This issue has been resolved. (TS ID: 224550)

- Previously, when you consolidated RBI 581 Recommendations, and then generated Inspection Tasks, the following issues existed on the Inspection Task datasheet:

  - The **Override Interval** check box was not selected.

  - The date in the Next Date field was set to the date on which you generated the Inspection Task. It should be set to the date in the Target Completion Date field in the associated Recommendation record.

  - The value in the Next Date Basis field was *RBI 581*, instead of *RBI 581 Recommendation*.

  These issues have been resolved. (TS ID: 224904, 224913)

- Previously, in Oracle databases, while evaluating the 581-Atmospheric Tank Bottom Corrosion damage mechanism, if the value in the Thinning Type field was *General*, then the corrosion rate was calculated incorrectly. This issue has been resolved. (TS ID: 235976).

Thickness Monitoring

- Previously, Minimum Thickness field values containing decimals were not displayed in the correct format when viewed on the Measurement Data Entry Page. This issue has been resolved. (TS ID: 230325)

- Previously, when you renewed 2,000 or more TML records at one time, Meridium APM timed out, locked up and became non responsive, or took more than 5 minutes to complete. This issue has been resolved. (TS ID: 221804)

- Previously, duplicate values were shown in the Material Specification picklist. This issue has been resolved. (TS ID: 213318)

- Previously, when you modified a TML record in the TMLs Pane grid, there was a delay after you typed text before the text was displayed. This issue has been resolved. (TS ID: 210021)

- Previously, the Measurement Status Indicator field were not disabled when the historical sequence number was not null. (TS ID: 209720)

- Previously, the Tank Stress data in the TML Datasheet used the API 650 code value instead of API 653. This issue has been resolved. (TS ID: 209718)

- Previously, you were unable to update Measurement Locations using a device. This issue has been resolved. (TS ID: 209701)

- Previously, when you viewed a TML group record on the **TM TMLs/Measurements** page using a custom datasheet, the Material Grade field drop-down list box did not populate as expected. This issue has been resolved. (TS ID: 209648)

- Previously, when you created a Thickness Measurement Location record, duplicate values were added to the dropdown boxes in the **Material Grade** and **Material Specifiction** fields. This issue has been resolved. (TS ID: 209633)

Obsolete Issues and Features

Mechanical Integrity

RBI 581

The Carbonate Concentration in Water field in the RBI 581 Cracking Damage Evaluation family has been deprecated. (TS ID: 227500)

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